# U.S. Department of Energy
## Office of the Chief Financial Officer

# CR LAN Year 2000
# Testing and Validation

# February 12, 1999

# Executive Summary

As part of the mandated Year 2000 effort, the CFO's Office has been conducting necessary testing and upgrading to ensure that the CR LAN is compliant by March 15, 1999. This effort has taken four basic forms:

-   Reviewing available product data,
-   Independent outside assessment,
-   Testing of operational network hardware using the software product Bindview, and
-   Actual testing in an isolated Year 2000 network environment.

Testing and Validation of the mission essential elements has verified that the CR LAN is compliant and has no significant year 2000 issues.

The testing sections have been broken out as follows:

Network Hardware (Servers):
All CFO network servers have been verified as compliant or have already been scheduled for upgrade, replacement, or retirement as applicable.

Workstation Hardware:
No significant issues exist. Potential roll over issues which were identified have been determined not to pose any issue due to the way in which workstations resynchronize the system date when attaching to the network.

Network Operating Systems:
Novell 4.11 (with support pack 6), Novell 5.0, and Win NT (with service pack 4) will be used exclusively within CR LAN by March 15, 1999 and have been determined to be compliant.

Workstation Operating Systems:
Win95, WinNT 4.0 (with service pack 4), and DOS 6.22 have each been tested and validated as compliant within the CR LAN environment.

Desktop Applications:
Core productivity software (also referred to as COTS or commercial-off-the-shelf-software) including email, word processing, spreadsheet, and internet browser applications have been tested and verified as compliant, with minor issues in some applications. These issues will not affect use of the applications.

# Table of Contents

# 1    Introduction

## 1.1  Purpose

The intent of this document is to provide information about the testing that has been performed to validate the Year 2000 compliance of the CR LAN. This document will:

- Identify the categories of network components tested,
- Describe the methods used to determine and validate the Year 2000 compliance of network components, and
- For each category, the document will describe:
    the method(s) of validation used,
    the results of testing , and
    recommendations for bringing the network components to Y2K compliance, if necessary.

## 1.2  Scope

The scope of this effort has been to validate the following categories of network components:

- CR LAN network servers,
- user workstations used to access the CR LAN,
- network Operating Systems running on CR LAN servers,
- operating Systems used on CR user workstations, and
- the COTS applications used on the CR LAN which have been identified as "mission critical".

## 1.3  Validation Methods

The effort to determine the Y2K compliance of CR network components has taken four forms:

- Review of Y2K compliance information provided by the vendor or manufacturer, primarily provided on vendor websites, but also provided via email from the vendor in response to Y2K compliance questions, and via telephone conversations with vendor representatives, (Y2K compliance information from vendor websites can be found in Appendix C)
- On-site visit by vendor representative to determine required upgrade for special-purpose communications server,
- Testing of operational network servers and desktop workstations using Bindview, a software product used to automatically test the BIOS and RTC Year 2000 date-handling capabilities, and
- Testing of network components in the CR LAN Y2K test lab.

The primary method of determining Y2K compliance of the CR LAN hardware (i.e.; network servers and user workstations) through the use of the software product Bindview. The Bindview software runs a series of tests, against the computer's BIOS and against the computer's Real Time Clock, to determine the ability of the computer to properly handle a variety of Y2K-significant dates.

The Y2K compliance of the CR LAN hardware was (for most of CR's hardware) validated again later when the Network Operating Systems which run on CR servers and the Operating Systems which run on CR workstations were tested. The tests of the NOS's and OS's included tests of whether the computer was capable of rolling over to various Y2K-significant dates, and capable of having the time reset to Y2K-significant dates and holding that time, when the computer was powered down. The ability of the computer to roll properly, or hold a date properly, when the computer is powered down, is a function of the BIOS and of the RTC.

The Network Operating Systems and Operating Systems used on the CR LAN were validated for Y2K compliance using a detailed test procedure. The test procedure included steps for:
> Rollover, Reboot, and Day of Week Tests,
> Manual Date Set Tests,
> Leap Year Tests,
> Date Window Tests,
> Arithmetic Date Tests,
> Special Value Tests,
> Audit Log Test, and
> Report Tests.

(The test plan used to validate the NOS's and OS's is described below in detail, in B.1.1 in Appendix B.)

The mission-critical core productivity software applications were tested using detailed test procedures developed specifically for each application. Development of these test plans took into consideration the Year 2000 information found on the vendor's web sites, as well as detailed knowledge of all the types of date processing performed by the application. The test plans used for each application can be found below in B.2 in Appendix B.

## 1.3.1 Bindview

BindView is an independent network assessment software utility purchased for use with Year 2000 efforts in the CFO's Office. This application is able to perform year 2000 compliance checks on both hardware and software remotely and automatically each time a user connects to the CR LAN.

BindView does this by comparing information it receives from polling a workstation against the database it maintains of hardware and software. This database was developed and loaded with information gathered in extensive independent reviews by the BindView

Corporation. This information is considered a valuable first step in CR to determine probable areas of Year 2000 weakness or compliance. Although this tool has been used for initial diagnostics and recommendations, mission essential components of CR LAN have also been tested in an isolated test lab representing the real world environment as closely as possible.

At the time that a user logs on to the CR LAN, Bindview performs a series of Y2K tests on the workstation, and writes the results of the tests to the network. Queries can be run in Bindview to display the results of these tests for each workstation. In addition to creating and maintaining Y2K compliance information for network-connected workstations, Bindview also provides the ability to collect Y2K compliance information from network servers and standalone workstations using floppy diskettes. This has helped to provide CR reasonable assurance that hardware and software, which can not be thoroughly tested in our isolated year 2000 lab, has been analyzed directly.
Bindview performs eight different Y2K compliance tests against both the BIOS and the Real Time Clock (RTC). The tests are listed in the table below:

| BIOS/RTC Test | Description |
| --- | --- |
| Roll to 2000 | Bindview checks whether an audited workstation's BIOS and RTC are capable of automatically rolling from December 31st, 1999, 11:59p.m. to January 1st, 2000, 12:00a.m. |
| Set to 2000 | Bindview checks whether an audited workstation's BIOS and RTC are capable of being manually set to January 1st, 2000, 12:00a.m. |
| Roll to leap year 2000 | Bindview checks whether an audited workstation's BIOS and RTC are capable of automatically rolling from February 28th, 2000, 11:59p.m. to February 29th, 2000, 12:00a.m. |
| Set to leap year 2000 | Bindview checks whether an audited workstation's BIOS and RTC are capable of being manually set to February 29th, 2000, 12:00a.m. |
| Roll to post-2000 leap year | Bindview checks whether an audited workstation's BIOS and RTC are capable of automatically rolling from February 28th, 2004, 11:59p.m. to February 29th, 2004, 12:00a.m. |
| Set to post-2000 leap year | Bindview checks whether an audited workstation's BIOS and RTC are capable of being manually set to February 29th, 2004, 12:00a.m. |
| Roll to post-2000 non-leap year | Bindview checks whether an audited workstation's BIOS and RTC *will not* automatically roll from February 28th, 2002, 11:59p.m. to an invalid leap year (February 29th, 2004, 12:00a.m.) |
| Set to post-2000 non leap year | Bindview checks whether an audited workstation's BIOS and RTC are capable of being manually set to March 1st, 2002, 12:00a.m. |

The Bindview database is available for use with other efforts beyond the year 2000 effort. Most notably Bindview provides an in depth analysis of inventory information for each workstation connected to the network.

# 1.3.2 Test Lab

In order to accomplish actual testing in a year 2000 environment without compromising the integrity of the production environment inside the CFO's Office, an isolated test lab was created and is maintained at the Quince Orchard facility. The CR Year 2000 Test Lab contains a representation of the CR production environment which will be running in the year 2000. Most testing has taken place in this environment. The only exceptions were for production equipment, which could not be moved into a test mode. Equipment that could not be moved into the test environment was analyzed using Bindview.

At the time that the COTS applications were tested for Y2K compliance in the CR Year 2000 Test Lab, the Test Lab network was moved ahead in time in increments to March 1, 2000. The system date for the Test Lab network will stay in the year 2000 (and later, in the year 2001), approximately 13 months ahead of the actual time, during the rest of this year. The CR Y2K Test Lab will be available for the various custom-built CR applications to use in their Y2K testing. After January 1, 2000, the system date of the CR Test Lab will be resynchronized to the actual date and time.

A diagram showing the servers and workstations in the CR Year 2000 Test Lab can be found on the next page. Information found in the blocks in the diagram representing the test lab computers include:

> Server Name (e.g.; CR-IIS),
> Computer Hardware Type (e.g.; Compaq 4000 EN),
> Network Operating System / Operating System (e.g.; NT 4.0),
> Server Role (e.g.; Web Services).

**SERVERS**                                                                                              **WORKSTATIONS**

| CR-IIS | CR-Y2K-LN1 | TESTER1 |
|---|---|---|
| COMPAQ 4000EN | COMPAQ 3000 | COMPAQ 4000EN |
| NT 4.0 | NT 4.0 | NT 4.0 |
| | Arcserve Backup | |
| Web services | Software | |

| CR-GTN1 | CR-Y2K | TESTER2 |
|---|---|---|
| COMPAQ 4000EN | DGI | COMPAQ 4000EN |
| NOVELL 5.0 | NOVELL 4.11 | WIN95 |
| 16 Bit applications, | Bindview | |
| printer, Logon, | | |
| PERSONNEL, DARTS | | |

| CR-GTN-AP | CR-Y2K-TM | TESTER3 |
|---|---|---|
| COMPAQ 4000EN | DGI | COMPAQ 4000EN |
| NT 4.0 | NOVELL 4.11 | DOS/WIN3.1 |
| | Will support Travel | |
| 32 Bit applications | Manager | |

| CR-FORS1 | CR-GTN_TEST1 |
|---|---|
| COMPAQ 4000EN | DGI |
| NOVELL 5.0 | NOVELL 4.11 |
| Image server | |

| CR-GTN-SQL |
|---|
| COMPAQ 4000EN |
| NT 4.0 |
| PMA, BTS, BARC |

**PERIPHERALS**

| CR-NT-BTS | HPIIIsi |
|---|---|
| COMPAQ 4000EN | HPIIIsi |
| NT 4.0 | |
| Lotus Notes | Network printer |

# 2    Network Server Hardware

## 2.1  Introduction

At the present time, CR LAN network servers include the following hardware types:
> Compaq Proliant 6000s,
> Compaq Proliant 3000s,
> Netframes,
> DGIs,
> CD NET 556/M CD Network Server from Meridian Data, Inc., and a
> CommSwitch 2500 communications server from Commvision.

The only servers that will be in production in the year 2000 will be Compaq Proliant 3000s, Compaq Proliant 6000s, and the Commvision communication server.  All NetFrame and lower end units will have been replaced by that time.

## 2.2  Testing Performed

The Compaq Proliant 3000s and Compaq Proliant 6000s in the CR LAN were tested using Bindview in the following manner:
> the servers were downed;
> the testing was performed from, and the test results written to, a floppy diskette;
> and the test results were incorporated into the Bindview database.

A Compaq Proliant 3000 was also tested in the CR Year 2000 Test Lab, using the Test Plan described in section 4.2 below.

In conversations with Compusolve, the vendor supporting the Commvision products, it was determined that the CommSwitch 2500 in CR LAN was definitely not Y2K compliant. A representative of Compusolve made an on-site visit to inspect the Commvision server with the objective of identifying any Y2K issues and recommending upgrades to address them. The current hardware is expected to be Y2K compliant given the release of the next software upgrade for this system. However, CR is planning on upgrading the hardware as recommended, both to improve performance and to make the unit compliant without regard to pending software releases.

Per the recommendation, the system processor in the Commvision 2500 will be replaced with the new Dual Pentium System Processor, which is Y2K compliant.

A spreadsheet on the next two pages shows the results of the Bindview tests on the tested CR LAN servers.

## 2.3  Results

The Compaq Proliant 3000s and Compaq Proliant 6000s in the CR LAN were shown by the Bindview tests to be Y2K compliant. The results of all eight Bindview tests, for both the servers' BIOS and RTC, were positive. (As further validation, the Compaq Proliant 3000 tested in the Y2K Test Lab was shown to be compliant, during the Network Operating System testing.)

## 2.4  Recommendations

As planned, the Netframe servers and DGI servers (known not to be Year 2000 compliant) should be replaced. The Commvision server should be upgraded as planned. The Compaq servers require no modification from their present configuration to function properly into the year 2000.

| Server Type | Server Name | BIOS | NOS Type | All BIOS Tests Passed? | All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Compaq 3000 | CR-GTN-AP | COMPAQ 16-May-97 | Win NT 3.51 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 3000 | CR-GTNSQ | COMPAQ 14-Nov-97 | Win NT 3.51 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 6000 | CRLN1 | COMPAQ 16-May-97 | Win NT 3.51 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 6000 (SFTIII) | CR-FORS-IN | COMPAQ 16-May-97 | Netware 4.11 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 6000 (SFTIII) | CR-FORS-IN | COMPAQ 16-May-97 | Netware 4.11 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| CommSwitch 2500 [1] | CR-GTN-CV | ? | Netware 4.11 | **No** | **No** | ? | ? | No | ? | ? | ? | ? | ? |

1  The system processor now in CR's CommSwitch 2500 is not Y2K compliant. The next software upgrade for the CommSwitch's system processor will make the CommSwitch 2500 Y2K compliant. The current upgrade plans for the CommSwitch 2500 are to:
   Replace the system board now with a newer Y2K compliant CommVision system board,
   Replace several of the CommVision Communications boards with newer Y2K compliant boards, and
   When the software upgrade for the system board is available, apply the software upgrade to all the CommVision Comm boards.

| Server Type | Server Name | BIOS | NOS Type | All BIOS Tests Passed? | All RTC Tests Passed? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Compaq 3000 | CR-GTN-AP | COMPAQ 16-May-97 | Win NT 3.51 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 3000 | CR-GTNSQ | COMPAQ 14-Nov-97 | Win NT 3.51 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 6000 | CRLN1 | COMPAQ 16-May-97 | Win NT 3.51 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 6000 (SFTIII) | CR-FORS-IN | COMPAQ 16-May-97 | Netware 4.11 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 6000 (SFTIII) | CR-FORS-IN | COMPAQ 16-May-97 | Netware 4.11 | **Yes** | **Yes** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| CommSwitch 2500 [1] | CR-GTN-CV | ? | Netware 4.11 | **No** | **No** | ? | ? | No | ? | ? | No | ? | ? |

1  The system processor now in CR's CommSwitch 2500 is not Y2K compliant. The next software upgrade for the CommSwitch's system processor will make the CommSwitch 2500 Y2K compliant. The current upgrade plans for the CommSwitch 2500 are to:
   Replace the system board now with a newer Y2K compliant CommVision system board,
   Replace several of the CommVision Communications boards with newer Y2K compliant boards, and
   When the software upgrade for the system board is available, apply the software upgrade to all the CommVision Comm boards.

# 3  Workstation Hardware

## 3.1  Introduction

Workstations which are used to connect to the CFO's LAN are primarily a mix of Compaq 4000s, Compaq ENs,  DGIs, DGIs with 90 Mhz upgrades, and Dunns, with a few nonstandard workstations, including Tomcats, an IBM Thinkpad, and a few Toshiba laptop computers.

## 3.2  Testing Performed

All CR LAN workstations were tested for Y2K compliance using Bindview, which was executed at logon. Bindview used eight separate tests to check both the computer's BIOS and RTC.

An example of the Bindview  report showing the results of Y2K compliance testing, with detail for each CR workstation, can be found in Appendix A. The spreadsheet on the next three pages shows a summary of this information by type of workstation. (Type of workstation is determined by hardware type and BIOS version. For instance, Compaq EN with a Compaq BIOS dated May 1, 1997.)

## 3.3  Results

The 324 CR workstations tested fell into 23 categories, or workstation types, as seen on the following spreadsheet. Of the 23 workstation types, 8 types (including 149 workstations) failed at least one of Bindview's Y2K compliance tests. These 8 included:

| | | |
|---|---|---|
| Continental | Award BIOS, Nov. 8, 1996 | (1 workstation), |
| DGI | AMI BIOS, June 6, 1992 | (1 workstation), |
| DGI | AMI BIOS, Oct. 10, 1994 | (1 workstation), |
| DGI | Award BIOS, Nov. 8, 1996 | (10 workstations), |
| DGI 90 Mhz Upgrade | Award BIOS, Nov. 8, 1996 | (124 workstations), |
| Dunn | Award BIOS, Nov. 8, 1996 | (3 workstations), |
| Dunn | Award BIOS, Jan. 3, 1997 | (1 workstation), |
| Dunn | Compaq BIOS, Feb. 26, 1998 | (1 workstation), |
| Dunn | Compaq BIOS | (1 workstation), |
| Tomcat | Award BIOS, Nov. 8, 1996 | (6 workstations). |

 While these 149 workstations had one or more failures in rolling automatically to Y2K-significant dates, all workstations on the CR LAN were capable of being set properly to those dates. For this reason, the failure of the 149 workstations to be totally Y2K compliant is not regarded as a serious issue.

The reason it is not regarded as serious is that, in the CR LAN environment, all workstations resynchronize their system date / time to the network server's system date / time when they first attach to the server. Therefore, all workstations will have their system date / time set properly when they first attach to the CR LAN, as long as the date / time is correct on the network server. The current plan for the time of the actual rollover to January 1, 2000, is that all servers on the CR LAN will be downed and brought back up, and the date / times of all network servers will be verified. All network-connected workstations in CR will therefore be forced to re-attach to the LAN (since they will have lost their network attachment when the network servers were downed). When they re-attach to the network server, they will resynchronize correctly to the server's date / time.

## 3.4   Recommendations

It has been established that all servers on the CR LAN will be downed and brought back up again in the early morning hours of January 1, 2000. At that time all workstations, regardless of whether or not they can rollover to the year 2000 correctly, will have the correct dates forced down on them when they resynchronize with the network server.

In addition, the Y2K compliance problem of CR LAN workstations will be further addressed by replacing many of the non-compliant workstations with new Compaq workstations. Between 41 and 150 workstations will be replaced during the remainder of the calendar year 1999. The planned replacement of non-compliant workstations should be accomplished as scheduled.

| Workstation Type | BIOS | Quantity | All BIOS Tests Passed? | All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? |
|---|---|---|---|---|---|---|---|---|---|
| Compaq 4000 | ? 4-Feb-98 | 19 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 4000 | COMPAQ 28-Sep-97 | 9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 1-May-97 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 26-Mar-98 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 13-Apr-98 | 23 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Continental | AWARD 8-Nov-96 | 1 | **No** | **No** | Yes | Yes | No | Yes | Yes |
| Dell | PHOENIX 6-Aug-98 | 3 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI | AMI 6-Jun-92 | 1 | **No** | **No** | Yes | Yes | No | Yes | Yes |
| DGI | AMI 10-Oct-94 | 1 | **No** | **No** | No | Yes | Yes | Yes | Yes |
| DGI | AMI 15-Jul-95 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI | AWARD 8-Nov-96 | 10 | **No** | **No** | No | Yes | Yes | Yes | Yes |
| DGI 90Mhz Upgrade | AWARD 8-Nov-96 | 124 | **No** | **No** | Yes | Yes | No | Yes | Yes |
| DGI Upgrade | AWARD 8-Nov-96 | 3 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI Upgrade | AWARD 26-Mar-97 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI Upgrade | ? 27-Jan-95 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 8-Nov-96 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 8-Nov-96 | 3 | **No** | **No** | Yes | Yes | No | Yes | Yes |
| Dunn | AWARD 3-Jan-97 | 7 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 3-Jan-97 | 1 | **No** | **No** | Yes | Yes | No | Yes | Yes |
| Dunn | AWARD 28-Mar-97 | 6 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 9-May-97 | 2 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 27-Aug-97 | 8 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | COMPAQ 26-Feb-98 | 1 | Yes | **No** | Yes | Yes | Yes | Yes | Yes |
| Dunn | COMPAQ | 1 | Yes | **No** | Yes | Yes | Yes | Yes | Yes |
| IBM Thinkpad | IBM 12-Dec-96 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Tomcat | AWARD 8-Nov-96 | 6 | **No** | **No** | No | Yes | Yes | Yes | Yes |
| Toshiba | TOSHIBA 1-Dec-97 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Toshiba | TOSHIBA 19-Mar-98 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

| Workstation Type | BIOS | Quantity | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? | Can RTC Roll to Leap 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Compaq 4000 | ? 4-Feb-98 | 19 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq 4000 | COMPAQ 28-Sep-97 | 9 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 1-May-97 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 26-Mar-98 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 13-Apr-98 | 23 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Continental | AWARD 8-Nov-96 | 1 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| Dell | PHOENIX 6-Aug-98 | 3 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI | AMI 6-Jun-92 | 1 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| DGI | AMI 10-Oct-94 | 1 | Yes | Yes | Yes | No | Yes | Yes | Yes |
| DGI | AMI 15-Jul-95 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI | AWARD 8-Nov-96 | 10 | Yes | Yes | Yes | No | Yes | Yes | Yes |
| DGI 90Mhz Upgrade | AWARD 8-Nov-96 | 124 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| DGI Upgrade | AWARD 8-Nov-96 | 3 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI Upgrade | AWARD 26-Mar-97 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DGI Upgrade | ? 27-Jan-95 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 8-Nov-96 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 8-Nov-96 | 3 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| Dunn | AWARD 3-Jan-97 | 7 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 3-Jan-97 | 1 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| Dunn | AWARD 28-Mar-97 | 6 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 9-May-97 | 2 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | AWARD 27-Aug-97 | 8 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dunn | COMPAQ 26-Feb-98 | 1 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| Dunn | COMPAQ | 1 | Yes | Yes | Yes | Yes | Yes | No | Yes |
| IBM Thinkpad | IBM 12-Dec-96 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Tomcat | AWARD 8-Nov-96 | 6 | Yes | Yes | Yes | No | Yes | Yes | Yes |
| Toshiba | TOSHIBA 1-Dec-97 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Toshiba | TOSHIBA 19-Mar-98 | 1 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

| Workstation Type | BIOS | Quantity | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? |
|---|---|---|---|---|---|---|
| Compaq 4000 | ? 4-Feb-98 | 19 | Yes | Yes | Yes | Yes |
| Compaq 4000 | COMPAQ 28-Sep-97 | 9 | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 1-May-97 | 1 | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 26-Mar-98 | 1 | Yes | Yes | Yes | Yes |
| Compaq EN | COMPAQ 13-Apr-98 | 23 | Yes | Yes | Yes | Yes |
| Continental | AWARD 8-Nov-96 | 1 | Yes | Yes | Yes | Yes |
| Dell | PHOENIX 6-Aug-98 | 3 | Yes | Yes | Yes | Yes |
| DGI | AMI 6-Jun-92 | 1 | Yes | Yes | Yes | Yes |
| DGI | AMI 10-Oct-94 | 1 | Yes | Yes | Yes | Yes |
| DGI | AMI 15-Jul-95 | 1 | Yes | Yes | Yes | Yes |
| DGI | AWARD 8-Nov-96 | 10 | Yes | Yes | Yes | Yes |
| DGI 90Mhz Upgrade | AWARD 8-Nov-96 | 124 | Yes | Yes | Yes | Yes |
| DGI Upgrade | AWARD 8-Nov-96 | 3 | Yes | Yes | Yes | Yes |
| DGI Upgrade | AWARD 26-Mar-97 | 1 | Yes | Yes | Yes | Yes |
| DGI Upgrade | ? 27-Jan-95 | 1 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 8-Nov-96 | 1 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 8-Nov-96 | 3 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 3-Jan-97 | 7 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 3-Jan-97 | 1 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 28-Mar-97 | 6 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 9-May-97 | 2 | Yes | Yes | Yes | Yes |
| Dunn | AWARD 27-Aug-97 | 8 | Yes | Yes | Yes | Yes |
| Dunn | COMPAQ 26-Feb-98 | 1 | Yes | Yes | Yes | Yes |
| Dunn | COMPAQ | 1 | Yes | Yes | Yes | Yes |
| IBM Thinkpad | IBM 12-Dec-96 | 1 | Yes | Yes | Yes | Yes |
| Tomcat | AWARD 8-Nov-96 | 6 | Yes | No | Yes | Yes |
| Toshiba | TOSHIBA 1-Dec-97 | 1 | Yes | Yes | Yes | Yes |
| Toshiba | TOSHIBA 19-Mar-98 | 1 | Yes | Yes | Yes | Yes |

# 4  Network Operating Systems

## 4.1  Introduction

At the present time, CR LAN network servers utilize the following Network Operating System types and versions:

> Netware 4.10,
> Netware 4.11 (with support pack 6),
> Netware 5.0, and
> Windows NT Server v4.0 (with service pack 4).

It had been planned that by the year 2000, all CR LAN Netware servers would be upgraded to version 4.11. After the Y2K testing of Novell 4.11 (with support pack 6), this plan was changed: it was determined that all Netware servers would be upgraded to Novell 5.0 prior to 12/31/1999. At that time, all CR network servers will be running either Netware 5.0 or Windows NT 4.0 Server (with service pack 4).

The following network operating systems were tested:

> Netware 5.0,
> Netware 4.11 (support pack v6), and
> Windows NT 4.0 Server (service pack 4).

## 4.2  Testing Performed

The tests of the Network Operating Systems were performed in the CR Y2K Test Lab, with the specific Network Operating System (NOS) loaded on a Compaq Proliant 3000, without the server communicating with other servers.

A test plan has been developed as a result of problems identified with the year 2000. The detailed test plan used for network operating systems, specified below in section B.1.1 in Appendix B, was written as general instructions. Specific knowledge of the network operating systems (e.g.; what methods can be used to reset the system date / time) is required in addition to apply these test cases.

The test procedures found in Appendix B.1.1 provide step by step instructions for performing each test. The results were recorded step by step as the tests were performed, and can be found in Appendix B.1.2.

## 4.3  Results

There were no problems found during the testing of any of the three Network Operating Systems. All tested network operating systems were found to be Year 2000 compliant. (The Check-off Sheets for the Network Operating System tests can be found in Appendix B.1.2.)

## 4.4  Recommendations

NetWare servers will be Y2K compliant with either NetWare 4.11 (support pack v.6) or NetWare 5.0.

Windows NT servers will be Y2K compliant with version 4.0, using service pack 4.

# 5 Workstation Operating Systems

## 5.1 Introduction

At the present time, CR LAN workstations utilize the following Operating System types and versions:

        MS DOS 6.22,
        Windows 95 4.00.950.B, and
        Windows NT Workstation v4.0 (with service pack 4).

Bindview identified 6 workstations using DOS 6.22, 245 workstations using Windows 95, and 12 workstations using Windows NT 4.0. Up until now, Windows 95 has been the standard for CR workstation operating systems. Those workstations with DOS 6.22 are using that operating system because the special applications accessed through those workstations will not run using Windows 95. Until now, the only workstations with Win NT 4.0 were used by network support personnel. That is changing now: the new standard will be Windows NT 4.0 workstation, replacing Windows 95. As workstations are being swapped out for new Compaq workstations, the new workstations will be using Windows NT 4.0.

The following workstation operating systems were tested:

        MS DOS 6.22,
        Windows 95, and
        Windows NT 4.0 Workstation (service pack 4).

## 5.2 Testing Performed

The tests of the Network Operating Systems were performed in the CR Y2K Test Lab, with the workstations being tested operating in stand-alone mode.

The test plan used to validate the workstation operating systems was the same as that used to validate network operating systems, described above in section B.1.1 in Appendix B. The results were recorded step by step as the tests were performed, and can be found in Appendix B.1.3.

## 5.3 Results

There were no significant problems found during the testing of any of the three operating systems. The minor issues that were found will not cause any serious problems into the year 2000.

The minor issues included:

Win NT 4.0:

XCOPY command with /D option: System would not accept as valid dates 12-31-99 and 2-29-2000.

Win 95:

File Manager: When View / Details is selected, the 2-digit year displayed is incorrect if the year is greater than 1999. (For example, if the last modified date is January 1, 2000, the date displayed is "1/1/:0")

## 5.4  Recommendations

NetWare servers will be Y2K compliant with either NetWare 4.11 (support pack v.6) or NetWare 5.0.

Windows NT servers will be Y2K compliant with version 4.0, using service pack 4.

# 6  Desktop Applications

## 6.1  Introduction

The core productivity software applications that were deemed essential for normal operations are:

>Lotus Notes v4.6,
>Microsoft Word '97,
>Microsoft Excel '97, and
>Microsoft Internet Explorer v4.

Lotus Notes is the primary email package currently in use by the CFO's Office.  It will be the only email package in CR by the year 2000 as all current ccMail users will have been migrated to Notes mail by that time.

Microsoft Word '97 is one of the two primary word processing packages currently in use by the CFO's Office.

Microsoft Excel '97 is one of the two primary spreadsheet packages currently in use by the CFO's Office.  Both Word '97 and Excel '97 are integrated in the MS Office `97 suite and work well in the CR environment.

Internet Explorer is the primary internet browser package currently used by the CFO's Office.

All the above applications are 32-bit applications; performance of 32-bit applications is improved over that of 16-bit applications.

Additional software packages included in Y2K compliance testing because they have a significant number of CR users were:

>Corel WordPerfect Suite 8,
>WordPerfect v6.1,
>Lotus 1-2-3, and
>Netscape Navigator 4.0.

Corel WordPerfect Suite 8.0 and WordPerfect 6.1 are both word processing applications; Corel Suite 8 is a 32-bit upgraded version of WordPerfect 6.1.

Lotus 1-2-3 `97 is a spreadsheet package.

Netscape Navigator is an internet browser currently in use by the CFO's Office.

## 6.2   Testing Performed

Test procedures for the mission-critical core productivity software applications were developed specifically for each application. The development of these test plans took into consideration Year 2000 issues / problems described by the vendor on their websites, as well as detailed knowledge of all the types of date processing performed by the application. The test plans used for each application can be found below in Appendix B.2.

The tests of the core productivity software applications were performed in the CR Y2K Test Lab, on Windows 95 or Win NT 4.0 workstations attached to the isolated Test Lab network. The test procedures involved testing on each of three dates:

> December 31, 1999
> January 1, 2000
> February 29, 2000.

Dates on the Test Lab servers were set at the server console and synchronized; then the workstations were rebooted and logged on to the Test Lab network.

## 6.3   Results

Lotus Notes v4.6 passed all Y2K compliance tests; no issues were found with this product. Integrated testing of the interaction of Notes mail with CR small systems was not possible at this time.

Microsoft Word '97 passed all Y2K compliance tests; no issues were found with this product.

Microsoft Excel ' 97 passed all Y2K compliance tests; no issues were found with this product.

Internet Explorer  v4.0 passed all Y2K compliance tests that could be performed in the Test Lab.  No issues were found with this product during this testing; however testing was limited in scope to simple intranet connections due to the isolation of the test environment.

Corel Suite 8 passed all Y2K compliance tests; no issues were found with this product.

Word Perfect 6.1 passed all Y2K compliance tests but one: it was unable to perform the File Search by Last Modified Date with Year 2000 dates. This is not considered a serious issue; WP 6.1 users should either move up to use the Suite 8 product or Word '97, or consider that the File Search function is not important in their use of the product.

Lotus 1-2-3 '97 passed all Y2K compliance tests; no issues were found with this product.

Netscape Navigator v 4.0 passed all Y2K compliance tests that could be performed in the CFO Test Lab.  No issues were found with this product during this testing; however,

testing was limited in scope to simple intranet connections due to the isolation of the test environment.

(The test procedures for the desktop applications, and the check-off sheets used during testing, can be found in Appendix B.2.)

## 6.4  Recommendations

Other than the Microsoft Office products (Excel '97 and Word '97), none of these products require any modification from their present form to function properly into the year 2000. The Microsoft Office products require the application of  the Office '97 SR2 Patch to function properly into the year 2000. (This patch can be downloaded from the Microsoft website at http://officeupdate.microsoft.com/Articles /sr2fact.htm)

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Ammons.CR-20.CR.CFO | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Anderson.CR-10.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Bailey.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Bakers.CR-60.CR.CFO | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Baldwinv.CR-40.CR.C | DGI | AMI 6/15/1995 | MSDOS | Yes | Yes | Yes | Yes | Yes |
| Baldwinv.CR-40.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Ballanti.CR-20.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Ballenge.CR-30.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Barnes.CR-50.CR.CFO | Tomcat | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | No | Yes |
| Barney.CR-60.CR.CFO | Dell | PHOENIX 8/6/1998 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| Baronoff.CR-40.CR.C | Dunn | AWARD 3/28/1997 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| BARRY | Compaq EN | COMPAQ 4/13/1998 | MSDOS | Yes | Yes | Yes | Yes | Yes |
| Beallp.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Belcher.CR-10.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Bennettl.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Bishopd.CR-50.CR.CF | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Boyer.CR-40.CR.CFO | Dunn | AWARD 8/27/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Breeden.CR-50.CR.CF | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Brewer.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Brodbeck.CR-50.CR.C | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| BROWN | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Brownc.CR-10.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Brownm.CR-10.CR.CFO | Dunn | AWARD 1/3/1997 | MSDOS | Yes | Yes | Yes | Yes | Yes |
| Brownmb.CR-30.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Bugg.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Bugg.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Bugg.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Bugg.CR-10.CR.CFO | Dunn | AWARD 1/3/1997 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| Burling.CR-60.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Buxtonj.CR-60.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Buxtonj.CR-60.CR.CF | Dunn | COMPAQ 2/26/1998 | Windows 95 | Yes | Yes | No | Yes | Yes |
| Calhount.CR-10.CR.C | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Campbelt.CR-20.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Cantave.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Casaleno.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Cason.CR-50.CR.CFO | Tomcat | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Champion.CR-30.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Chatters.CR-30.CR.C | Dunn | AWARD 1/3/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Chayetts.CR-20.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Childsda.CR-30.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Choudhry.CR-40.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Ciullio.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Clinton.CR-50.CR.CF | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| COLLER | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Collins.CR-60.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Condons.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Copelanl.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| CORNELL | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Craigr.CR-10.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| cr-gtn-tm | Dunn | AWARD 8/27/1997 | Windows NT | No | <N/A> | <N/A> | <N/A> | <N/A> |
| CRUICK | Dunn | AWARD 5/9/1997 | Windows NT | No | <N/A> | <N/A> | <N/A> | <N/A> |
| Dalyh.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Davisga.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Daviskc.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Dawsonr.CR-60.CR.CF | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Dawsonr.CR-60.CR.CF | Dunn | AWARD 8/27/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Dehanas.CR-10.CR.CF | DGI Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Delair.CR-50.CR.CFO | Dunn | AWARD 1/3/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Diagne.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Dickens.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Dillman.CR-10.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Dollaway.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Donahue.CR-40.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Dulovich.CR-20.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Dunlap.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | Yes | Yes |
| Emond.CR-1_3.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Epps.CR-20.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Farringt.CR-10.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Farringt.CR-10.CR.C | Dunn | AWARD 11/8/1996 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Ferril.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Ferril.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Fishert.CR-30.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Forder.CR-50.CR.CFO | Tomcat | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Fulwood.CR-1_3.CR.C | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Gallen.CR-1_3.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Gallen.CR-1_3.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Garnand.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| GELFER | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Gelles.CR-10.CR.CFO | DGI | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | No | Yes |
| Gelles.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Goodrich.CR-50.CR.C | Tomcat | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | Yes | Yes |
| Graya.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| haganb.CR-1_3.CR.CF | DGI Upgrade | AWARD 11/8/1996 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| Haleym.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Hall.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Hane.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Harbell.CR-40.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Harshmal.CR-30.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hartc.CR-50.CR.CFO | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Hebronm.CR-50.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hecht.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Hellerr.CR-30.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hemme.CR-40.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Henderso.CR-10.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hermanj.CR-60.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Herrgott.CR-60.CR.C | Compaq EN | COMPAQ 5/1/1997 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| Herrgott.CR-60.CR.C | Dell | PHOENIX 8/6/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hillt.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | No | Yes |
| Hillt.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Hoch.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Hodson.CR-20.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hoen.CR-60.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| HOLLAND | Compaq EN | COMPAQ 3/26/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| HOLLAND | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Holmese.CR-10.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Howard.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Howards.CR-60.CR.CF | Dell | PHOENIX 8/6/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hubbard.CR-10.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Hubbard.CR-10.CR.CF | Dunn | AWARD 3/28/1997 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| Huey.CR-10.CR.CFO | Dunn | AWARD 3/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Huffer.CR-60.CR.CFO | Dunn | AWARD 1/3/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Iager.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Isemann.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Jacksont.CR-10.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Jacksonv.CR-1_3.CR. | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Johnsang.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Johnsona.CR-10.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Kaderabk.CR-10.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Keller.CR-60.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Kelleyp.CR-10.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Kempd.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Kennedya.CR-50.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Kennedye.CR-20.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Kipe.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Knight.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Knopp.CR-60.CR.CFO | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Kos.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Kramerl.CR-60.CR.CF | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Kurtyka.CR-60.CR.CF | Dunn | AWARD 5/9/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Lachp.CR-10.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Lamb.CR-1_3.CR.CFO | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Lao.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Le.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Lewism.CR-1_3.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Lopez.CR-30.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Lorahc.CR-60.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Lorahc.CR-60.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | Yes | Yes |
| Lowstute.CR-40.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Loyd.CR-40.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Luczak.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Lynchm.CR-20.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Lynn.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | Yes | Yes |
| markk.CDSI.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows NT | Yes | Yes | Yes | Yes | Yes |
| markk.CDSI.CR.CFO | Toshiba | TOSHIBA 3/19/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Martusd.CR-40.CR.CF | DGI Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Masonk.CR-1_3.CR.CF | DGI | AMI 10/10/1994 | MSDOS | Yes | No | No | No | Yes |
| Mathisj.CR-1_3.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| MCALLISM | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| McCormia.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Mcduffie.CR-1_3.CR. | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| McGaha.CR-40.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| McKimmey.CR-50.CR.C | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Micheala.CR-60.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Millerlb.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Millerme.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Millermk.CR-60.CR.C | Dunn | AWARD 8/27/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Millerw.CR-40.CR.CF | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Millerw.CR-40.CR.CF | Dunn | AWARD 8/27/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Mitchelg.CR-30.CR.C | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Moltz.CR-50.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Morganj.CR-50.CR.CF | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Moser.CR-50.CR.CFO | DGI | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | No | Yes |
| Moss.CR-1_3.CR.CFO | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Moxleyl.CR-50.CR.CF | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Myersr.CR-20.CR.CFO | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| nulty.CR-1_3.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| O'Connor.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Odegard.CR-50.CR.CF | Continental | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Pafe.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| palmit.CR-1_3.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| palmit.CR-1_3.CR.CF | IBM Thinkpad | IBM 12/12/1996 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Parkerj.CR-1_3.CR.C | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Parrish.CR-60.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Pegnato.CR-50.CR.CF | Tomcat | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Pegnatop.CR-50.CR.C | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Perkinsd.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Perrin.CR-10.CR.CFO | DGI | AMI 6/6/1992 | MSDOS | Yes | No | No | Yes | Yes |
| Perrin.CR-10.CR.CFO | Dunn | AWARD 1/3/1997 | MSDOS | Yes | No | No | Yes | Yes |
| Perrin.CR-10.CR.CFO | Toshiba | TOSHIBA 12/1/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Pershing.CR-30.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Powersc.CR-20.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| pricej.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Reader.CR-30.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Reidj.CR-1_3.CR.CFO | Dunn | AWARD 3/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Reids.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Reitz.CR-10.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Rhinaman.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Rigby.CR-10.CR.CFO | Dunn | AWARD 8/27/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Rippeon.CR-40.CR.CF | Dunn | AWARD 8/27/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Robertst.CR-40.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| ROBINSON | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| robinson.CR-10.CR.C | DGI Upgrade | AWARD 1/27/1995 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Robinson.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Robison.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Rosenbes.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Rosicky.CR-20.CR.CF | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Ross.CR-20.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| rossp.CR-1_3.CR.CFO | Dunn | COMPAQ ? | Windows 95 | Yes | Yes | No | Yes | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Rupani.CR-20.CR.CFO | Dunn | AWARD 8/27/1997 | Windows 95 | No | Yes | <N/A> | Yes | Yes |
| Schanckk.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Seay.CR-50.CR.CFO | DGI | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Shatzer.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Sherman.CR-20.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | No | Yes |
| Smedley.CR-1_3.CR.C | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Smedley.CR-1_3.CR.C | Dunn | AWARD 3/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| smithd.CR-1_3.CR.CF | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Smithi.CR-60.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Souders.CR-50.CR.CF | Tomcat | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Sparkman.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | No | No | <N/A> | Yes | Yes |
| Squires.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Stewartf.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | MSDOS | Yes | No | No | Yes | Yes |
| Strahler.CR-10.CR.C | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Susans.CR-60.CR.CFO | DGI Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Sweeney.CR-30.CR.CF | Dunn | AWARD 3/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Sweeneyd.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Tayler.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Taylorb.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Taylorb.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Tengan.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Tengan.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Thomasja.CR-40.CR.C | Dunn | AWARD 1/3/1997 | MSDOS | Yes | Yes | Yes | Yes | Yes |
| Tyer.CR-1_3.CR.CFO | Compaq 4000 | COMPAQ 2/4/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Uhlig.CR-20.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Uzzell.CR-20.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Valentil.CR-60.CR.C | Compaq 4000 | COMPAQ 9/28/1997 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Vasquez.CR-50.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Vickers.CR-10.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Waret.CR-50.CR.CFO | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Waters.CR-10.CR.CFO | Dunn | AWARD 1/3/1997 | MSDOS | Yes | Yes | Yes | Yes | Yes |
| Watsons.CR-1_3.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| White.CR-50.CR.CFO | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |

| Node Name | Workstation Type | BIOS Type / Date | OS Type | Y2K All Tests Performed? | Y2K All BIOS Tests Passed? | Y2K All RTC Tests Passed? | Can BIOS Avoid Roll to Leap 2002? | Can BIOS Avoid Set to Leap 2002? |
|---|---|---|---|---|---|---|---|---|
| Williamd.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Willpatr.CR-50.CR.C | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Wilsona.CR-50.CR.CF | Compaq EN | COMPAQ 4/13/1998 | Windows 95 | Yes | Yes | Yes | Yes | Yes |
| Wilsonh.CR-60.CR.CF | DGI 90Mhz Upgrade | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Womack.CR-50.CR.CFO | Dunn | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Wong.CR-10.CR.CFO | Dunn | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |
| Yared.CR-1_3.CR.CFO | Dunn | AWARD 11/8/1996 | Windows 95 | Yes | No | No | Yes | Yes |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Ammons.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Anderson.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Bailey.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bakers.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Baldwinv.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Baldwinv.CR-40.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Ballanti.CR-20.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Ballenge.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Barnes.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Barney.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Baronoff.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| BARRY | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Beallp.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Belcher.CR-10.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bennettl.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bishopd.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Boyer.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Breeden.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Brewer.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Brodbeck.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| BROWN | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Brownc.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Brownm.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Brownmb.CR-30.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bugg.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bugg.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bugg.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Bugg.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Burling.CR-60.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Buxtonj.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Buxtonj.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Calhount.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Campbelt.CR-20.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Cantave.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Casaleno.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Cason.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Champion.CR-30.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Chatters.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Chayetts.CR-20.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Childsda.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Choudhry.CR-40.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Ciullio.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Clinton.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| COLLER | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Collins.CR-60.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Condons.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Copelanl.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| CORNELL | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Craigr.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| cr-gtn-tm | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> |
| CRUICK | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> |
| Dalyh.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Davisga.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Daviskc.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Dawsonr.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dawsonr.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dehanas.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Delair.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Diagne.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Dickens.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Dillman.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Dollaway.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Donahue.CR-40.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Dulovich.CR-20.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Dunlap.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Emond.CR-1_3.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Epps.CR-20.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Farringt.CR-10.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Farringt.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Ferril.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Ferril.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Fishert.CR-30.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Forder.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Fulwood.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Gallen.CR-1_3.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Gallen.CR-1_3.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Garnand.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| GELFER | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Gelles.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Gelles.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Goodrich.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Graya.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| haganb.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Haleym.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Hall.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Hane.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Harbell.CR-40.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Harshmal.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hartc.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Hebronm.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hecht.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Hellerr.CR-30.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hemme.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Henderso.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hermanj.CR-60.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Herrgott.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Herrgott.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hillt.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | No | Yes | No |
| Hillt.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Hoch.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Hodson.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hoen.CR-60.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| HOLLAND | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| HOLLAND | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Holmese.CR-10.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Howard.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Howards.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hubbard.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hubbard.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Huey.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Huffer.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Iager.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Isemann.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Jacksont.CR-10.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Jacksonv.CR-1_3.CR. | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Johnsang.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Johnsona.CR-10.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Kaderabk.CR-10.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Keller.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Kelleyp.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Kempd.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Kennedya.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Kennedye.CR-20.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Kipe.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Knight.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Knopp.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Kos.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Kramerl.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Kurtyka.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Lachp.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Lamb.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Lao.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Le.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Lewism.CR-1_3.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Lopez.CR-30.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Lorahc.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Lorahc.CR-60.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Lowstute.CR-40.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Loyd.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Luczak.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Lynchm.CR-20.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Lynn.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| markk.CDSI.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| markk.CDSI.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Martusd.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Masonk.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Mathisj.CR-1_3.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| MCALLISM | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| McCormia.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Mcduffie.CR-1_3.CR. | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| McGaha.CR-40.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| McKimmey.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Micheala.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Millerlb.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Millerme.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Millermk.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Millerw.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Millerw.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Mitchelg.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Moltz.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Morganj.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Moser.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Moss.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Moxleyl.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Myersr.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| nulty.CR-1_3.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| O'Connor.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Odegard.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Pafe.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| palmit.CR-1_3.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| palmit.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Parkerj.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Parrish.CR-60.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Pegnato.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Pegnatop.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Perkinsd.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Perrin.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Perrin.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Perrin.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Pershing.CR-30.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Powersc.CR-20.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| pricej.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Reader.CR-30.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | No | Yes | No |
| Reidj.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Reids.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Reitz.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Rhinaman.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Rigby.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rippeon.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Robertst.CR-40.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| ROBINSON | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| robinson.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Robinson.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Robison.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Rosenbes.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Rosicky.CR-20.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Ross.CR-20.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | No | Yes | No |
| rossp.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Rupani.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Schanckk.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Seay.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes |
| Shatzer.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Sherman.CR-20.CR.CF | No | Yes | Yes | Yes | Yes | Yes | No | Yes | No |
| Smedley.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Smedley.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| smithd.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Smithi.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Souders.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Sparkman.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Squires.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Stewartf.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Strahler.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Susans.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Sweeney.CR-30.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Sweeneyd.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Tayler.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Taylorb.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Taylorb.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Tengan.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Tengan.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Thomasja.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Tyer.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Uhlig.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Uzzell.CR-20.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Valentil.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vasquez.CR-50.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Vickers.CR-10.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Waret.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Waters.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Watsons.CR-1_3.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| White.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can BIOS Roll to 2000? | Can BIOS Roll to Leap 2000? | Can BIOS Roll to Leap 2004? | Can BIOS Set to 2000? | Can BIOS Set to Leap 2000? | Can BIOS Set to Leap 2004? | Can RTC Avoid Roll to Leap 2002? | Can RTC Avoid Set to Leap 2002? | Can RTC Roll to 2000? |
|---|---|---|---|---|---|---|---|---|---|
| Williamd.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Willpatr.CR-50.CR.C | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Wilsona.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Wilsonh.CR-60.CR.CF | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Womack.CR-50.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Wong.CR-10.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Yared.CR-1_3.CR.CFO | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Ammons.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110906:0008C7A01B50 | | | |
| Anderson.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7299C57 | | | |
| Bailey.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF3FF5C6 | 146.138.83.166 | c266 | s92524 |
| Bakers.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110906:0008C7A01B60 | 146.138.83.125 | e-154 | s18638 |
| Baldwinv.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00608CCCA1D4 | | D-129 | 619 |
| Baldwinv.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00608CCCA172 | | D-129 | S92894 |
| Ballanti.CR-20.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCCA0CE | 146.138.82.203 | 4B-144 | s81919 |
| Ballenge.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7AA0BB8 | | | |
| Barnes.CR-50.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00110900:00104B92D4BD | 146.138.83.154 | c-214 | s83374 |
| Barney.CR-60.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00110900:00C04F799EB7 | 146.138.84.178 | e255 | s15294 |
| Baronoff.CR-40.CR.C | Yes | Yes | <N/A> | Yes | Yes | 00110900:006008A0B3B0 | 146.138.83.222 | e-171 | s15292 |
| BARRY | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78C8765 | | | |
| Beallp.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF325402 | 146.138.83.201 | C-271 | S88544 |
| Belcher.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00608CCA4EA9 | 146.138.83.155 | D-222 | s86407 |
| Bennettl.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:00608CC889D3 | 146.138.84.142 | E-263 | s83401 |
| Bishopd.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78C208C | | e-268 | s92438 |
| Boyer.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:006008933875 | 146.138.83.95 | e-177 | s15405 |
| Breeden.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF267815 | 146.138.83.246 | c-225 | s924459 |
| Brewer.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:00104B701BFD | 146.138.83.247 | | |
| Brodbeck.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF1A3569 | 146.138.83.144 | c216 | s92620 |
| BROWN | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7FC9B6B | 146.138.82.253 | 4a085 | s21118 |
| Brownc.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7FCAB8F | 146.138.83.206 | d223 | s21122 |
| Brownm.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0060979980D1 | | 4A-085 | S12991 |
| Brownmb.CR-30.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00A024999CCE | 146.138.83.183 | C-170 | s99557 |
| Bugg.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF2671E1 | | 4a085 | S91647 |
| Bugg.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCA6DB9 | | | |
| Bugg.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF06C5E2 | | 4A-089 | S87273 |
| Bugg.CR-10.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00210400:00104BD38139 | 146.138.82.137 | | |
| Burling.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF17DA9E | | | |
| Buxtonj.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7FCFBC8 | | | |
| Buxtonj.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:006008E9EF5E | 146.138.74.54 | e-178 | s21105 |
| Calhount.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7FC7C75 | 146.138.83.230 | d-228 | s21117 |
| Campbelt.CR-20.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:00608CCD5532 | 146.138.83.157 | d-107 | s87370 |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Cantave.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:00609770DD63 | 146.138.82.216 | | |
| Casaleno.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF687B55 | 146.138.83.107 | e275 | s87396 |
| Cason.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110906:00608CF25D79 | 146.138.83.112 | C-263 | s91710 |
| Champion.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF087D99 | 146.138.83.160 | C-179 | S92409 |
| Chatters.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF1A3521 | 146.138.83.114 | c168 | s14484 |
| Chayetts.CR-20.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF237456 | 146.138.84.138 | D-115 | S83400 |
| Childsda.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7B268C6 | | | |
| Choudhry.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF1A3515 | | d-127 | s79616 |
| Ciullio.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00105A12961F | 146.138.83.163 | c-208 | s92890 |
| Clinton.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00608CC889CF | 146.138.83.137 | c-227 | s84597 |
| COLLER | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF06B0B6 | | | |
| Collins.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00608CC8B0BB | 146.138.84.160 | | |
| Condons.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AFCFE8E9 | 146.138.83.181 | | |
| Copelanl.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:00608CC8FD1D | | | |
| CORNELL | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF238BA9 | 146.138.82.140 | 4a-159 | S91261 |
| Craigr.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0008C78CF845 | | | |
| cr-gtn-tm | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | 00110900:0060089FCD3F | 146.138.84.98 | E253 | S15287 |
| CRUICK | <N/A> | <N/A> | <N/A> | <N/A> | <N/A> | 00110900:00105A12989C | 146.138.84.166 | | |
| Dalyh.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF25C365 | 146.138.82.142 | 4a146 | s91672 |
| Davisga.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF1A3552 | 146.138.83.220 | c221 | s91706 |
| Daviskc.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00105A215C53 | 146.138.83.132 | | |
| Dawsonr.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7C0C3CE | 146.138.83.237 | E-156 | S18405 |
| Dawsonr.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:006008A0B3B8 | 146.138.82.178 | | |
| Dehanas.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7A01B82 | 146.138.82.143 | 4A-159 | S18639 |
| Delair.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:00A024DA4EB2 | 146.138.83.106 | C-276 | S14482 |
| Diagne.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00609770DB8C | 146.138.84.117 | e 171 | s83903 |
| Dickens.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF37464C | 146.138.84.158 | e276 | s92626 |
| Dillman.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7607A67 | 146.138.83.167 | d-221 | s18788 |
| Dollaway.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF17D63B | 146.138.83.172 | C252 | S87318 |
| Donahue.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00609770DD6E | 146.138.83.168 | E161 | S92528 |
| Dulovich.CR-20.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF178319 | 146.138.83.170 | D-123 | S87266 |
| Dunlap.CR-40.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00110900:00609770DC97 | 146.138.83.111 | E-177 | S92530 |
| Emond.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608CC888C0 | 146.138.82.147 | 4a-128 | s95556 |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Epps.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCAC88A | 146.138.82.148 | 4b-144 | S86296 |
| Farringt.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00608CC8BFF5 | | 4A085 | s84602 |
| Farringt.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00104BD3813F | 146.138.82.234 | | |
| Ferril.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF25D211 | 146.138.84.121 | | |
| Ferril.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF06B145 | | c-207 | s87417 |
| Fishert.CR-30.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF340E63 | 146.138.83.171 | C-179 | S92561 |
| Forder.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF14845B | 146.138.83.191 | C-264 | S89970 |
| Fulwood.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7A01B90 | 146.138.82.192 | 4a133 | S18632 |
| Gallen.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF1A34E8 | 146.138.82.60 | | |
| Gallen.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF687B51 | 146.138.83.244 | c-172 | s92439 |
| Garnand.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00104B9AA13D | 146.138.83.120 | | |
| GELFER | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCAC471 | | | |
| Gelles.CR-10.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00110900:0020AF1A352B | 146.138.84.153 | | |
| Gelles.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF9DF363 | | | |
| Goodrich.CR-50.CR.C | Yes | Yes | <N/A> | Yes | Yes | 00000000:0020AF267691 | 146.138.83.126 | c-263 | s92451 |
| Graya.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF0693D8 | 146.138.82.153 | 4a-146 | s88495 |
| haganb.CR-1_3.CR.CF | Yes | Yes | <N/A> | Yes | Yes | 00210400:006097BD801A | 146.138.82.145 | 4b-144 | s92452 |
| Haleym.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:00608CECCFE5 | 146.138.83.147 | C-219 | S85935 |
| Hall.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF313435 | 146.138.84.174 | e-276 | s92448 |
| Hane.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF312BEC | | | |
| Harbell.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00104BD38144 | 146.138.83.150 | e159 | s89963 |
| Harshmal.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7AA669A | | | |
| Hartc.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:00104B92D465 | 146.138.84.140 | c-214 | s89953 |
| Hebronm.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0008C710B8F5 | 146.138.83.223 | e-262 | s18787 |
| Hecht.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:00608CC889A2 | | d-127 | s86426 |
| Hellerr.CR-30.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C760FA6C | 146.138.83.161 | c-172 | s18791 |
| Hemme.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7FC7B87 | 146.138.83.152 | c-244 | s21121 |
| Henderso.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0008C79AEB32 | | | |
| Hermanj.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF37461B | 146.138.84.113 | E-256 | 589930 |
| Herrgott.CR-60.CR.C | Yes | Yes | <N/A> | Yes | Yes | 00000000:0008C74021D5 | 146.138.83.115 | e255 | cc6031 |
| Herrgott.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00C04F799ED6 | 146.138.83.115 | | |
| Hillt.CR-50.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00210400:0020AF14845A | 146.138.82.236 | | |
| Hillt.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00104BD3814D | 146.138.82.219 | | |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Hoch.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00104B9ACB21 | | e-163 | s92424 |
| Hodson.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0008C78CA83E | | 4b144 | s91647 |
| Hoen.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00A02477A225 | 146.138.84.114 | e251 | S88576 |
| HOLLAND | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78C8BB0 | | | |
| HOLLAND | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF3256FF | | E-253 | S-01596 |
| Holmese.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF9DF2EF | 146.138.83.133 | D-211 | S97653 |
| Howard.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF325584 | 146.138.84.159 | e275 | s92404 |
| Howards.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00C04F799EB3 | 146.138.84.176 | | |
| Hubbard.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7FCAB33 | 146.138.82.157 | 4A-071 | S21120 |
| Hubbard.CR-10.CR.CF | Yes | Yes | <N/A> | Yes | Yes | 00210400:0060088D9AFE | 146.138.82.166 | | |
| Huey.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0060088D9C2C | 146.138.82.128 | | |
| Huffer.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0060080ACD39 | 146.138.83.236 | | |
| Iager.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF3FF5B4 | 146.138.83.175 | | |
| Isemann.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF0706BB | 146.138.83.117 | c227 | s92454 |
| Jacksont.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCCA1D5 | 146.138.82.191 | 4a-152 | s87287 |
| Jacksonv.CR-1_3.CR. | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF340E61 | | | |
| Johnsang.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF06B135 | | | |
| Johnsona.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00608CECDB73 | 146.138.82.195 | 4A-159 | s86083 |
| Kaderabk.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF25BD6B | 146.138.82.220 | 4A-149 | S88493 |
| Keller.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7299D0E | | e-170 | s88543 |
| Kelleyp.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7FC7CAD | | | |
| Kempd.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00609770DD66 | 146.138.84.133 | e-159 | s81860 |
| Kennedya.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C79A47B5 | | | |
| Kennedye.CR-20.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7AACE40 | | | |
| Kipe.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00608CCAC3BF | 146.138.83.187 | D215 | s97673 |
| Knight.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF3256FA | | | |
| Knopp.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7C0C392 | 146.138.83.139 | E-178 | S18404 |
| Kos.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF267818 | 146.138.83.188 | D-232 | S88607 |
| Kramerl.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7297528 | | | |
| Kurtyka.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF3FF5D0 | 146.138.83.129 | | |
| Lachp.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7607A4F | 146.138.83.189 | D-221 | S18790 |
| Lamb.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7A01B9E | 146.138.82.61 | 4a107 | s18633 |
| Lao.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00609770D89C | | | |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Le.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00608CC88971 | 146.138.83.118 | E-167 | S95144 |
| Lewism.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF19F081 | | | |
| Lopez.CR-30.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF3256F5 | 146.138.84.101 | C-169 | S92568 |
| Lorahc.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78C099D | | | |
| Lorahc.CR-60.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00000000:0020AF313471 | 146.138.83.231 | e-180 | s91317 |
| Lowstute.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00609770D951 | 146.138.84.118 | E-151 | S88535 |
| Loyd.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7299C46 | | | |
| Luczak.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF238BA7 | | | |
| Lynchm.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608C877AE8 | 146.138.82.162 | 4b-144 | s86081 |
| Lynn.CR-50.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00000000:0020AF19765B | 146.138.84.119 | C203 | s83406 |
| markk.CDSI.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00650000:0008C702B2DA | 146.138.251.221 | | |
| markk.CDSI.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:006008B64A85 | 146.138.82.112 | na | na |
| Martusd.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00608CC889CB | 146.138.84.132 | E-169 | S92549 |
| Masonk.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF25BD59 | | 4B-127 | S81851 |
| Mathisj.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCAC8A0 | 146.138.82.165 | 4A128 | s81893 |
| MCALLISM | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF1A34F9 | 146.138.82.190 | 4A-149 | S87343 |
| McCormia.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF312BF8 | 146.138.83.121 | | |
| Mcduffie.CR-1_3.CR. | Yes | Yes | Yes | Yes | Yes | 00210400:00608C86A1EB | | | |
| McGaha.CR-40.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:00609770D922 | | | |
| McKimmey.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF178597 | 146.138.83.159 | c-254 | S91312 |
| Micheala.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78CC72E | 146.138.83.103 | | |
| Millerlb.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:00A02477A1AF | 146.138.83.217 | | |
| Millerme.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00105A214BB7 | 146.138.83.238 | | |
| Millermk.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:006008A0B5C3 | 146.138.84.130 | | |
| Millerw.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C72994F6 | | | |
| Millerw.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:006008CAEC42 | 146.138.83.149 | e-163 | s15291 |
| Mitchelg.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00608CC88968 | 146.138.84.152 | c 180 | s81769 |
| Moltz.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7607A0F | 146.138.83.226 | E-272 | S18785 |
| Morganj.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C760FA74 | 146.138.83.192 | C209 | S18786 |
| Moser.CR-50.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00000000:0020AF3FF5CF | 146.138.83.141 | c-272 | s91705 |
| Moss.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7A00BFC | 146.138.82.207 | 4A-133 | |
| Moxleyl.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78C8BB0 | | | |
| Myersr.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF19F080 | | | |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| nulty.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF3783AC | 146.138.82.217 | | |
| O'Connor.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF17D854 | 146.138.83.221 | c-270 | s83412 |
| Odegard.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF2675CA | 146.138.83.119 | c-271 | s05010 |
| Pafe.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCAC829 | 146.138.82.193 | 4a-153 | s91684 |
| palmit.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF3FF5E0 | 146.138.82.215 | 4a152 | S82949 |
| palmit.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020355E2E64 | 146.138.82.233 | | |
| Parkerj.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7FC6BFC | 146.138.82.208 | | |
| Parrish.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF50D295 | 146.138.84.110 | e-256 | s87341 |
| Pegnato.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF17D9EB | 146.138.83.123 | | |
| Pegnatop.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7607A3B | 146.138.83.127 | E-259 | S18789 |
| Perkinsd.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00608CCCA13D | 146.138.83.135 | c-216 | s81773 |
| Perrin.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF341071 | | 4A-159 | S83239 |
| Perrin.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00600806E947 | | 4A-159 | S12988 |
| Perrin.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00E098014DA8 | 146.138.82.108 | 4A-159 | S20392 |
| Pershing.CR-30.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF148444 | 146.138.83.194 | | |
| Powersc.CR-20.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF325581 | 146.138.83.195 | d-115 | s92521 |
| pricej.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF68792A | 146.138.82.179 | 4a-152 | |
| Reader.CR-30.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF1A3511 | 146.138.83.196 | C-177 | S86101 |
| Reidj.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0060088D9C38 | 146.138.82.209 | 4A 133 | S16221 |
| Reids.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608C83A0DD | 146.138.82.173 | 4A-152 | S95583 |
| Reitz.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF25D22C | 146.138.82.174 | 4a-146 | S89978 |
| Rhinaman.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF1A350E | 146.138.84.126 | | |
| Rigby.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0060088D9C49 | 146.138.82.175 | 4a146 | s16218 |
| Rippeon.CR-40.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:006097D1D4D7 | 146.138.83.109 | E-175 | S14487 |
| Robertst.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF50D299 | 146.138.84.125 | e-276 | s92442 |
| ROBINSON | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCAC819 | | | |
| robinson.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00600000:0020AF4D39B3 | | | |
| Robinson.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00600890179F | 146.138.83.131 | | |
| Robison.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF19E7B0 | 146.138.83.239 | c256 | s92460 |
| Rosenbes.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00105A1298DA | 146.138.83.228 | | |
| Rosicky.CR-20.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0008C78CA935 | 146.138.82.176 | 4b-144 | s87388 |
| Ross.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCCA1C5 | 146.138.82.152 | 4B-144 | S91242 |
| rossp.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:006008B3756C | 146.138.82.52 | 4A133 | s18920 |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Rupani.CR-20.CR.CFO | Yes | Yes | <N/A> | Yes | Yes | 00110900:00105A1296B6 | 146.138.83.197 | | |
| Schanckk.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:00104B9ACC09 | 146.138.83.140 | | |
| Seay.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF1A3553 | 146.138.83.240 | 262 | s83398 |
| Shatzer.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00608CCA4EF7 | 146.138.84.123 | e271 | s89881 |
| Sherman.CR-20.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCCA0F3 | 146.138.82.181 | 4b-144 | S81874 |
| Smedley.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7B22CF2 | | | |
| Smedley.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:0060088D9C3C | 146.138.82.90 | 4A133 | S16222 |
| smithd.CR-1_3.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7A01B6C | 146.138.82.250 | | |
| Smithi.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C7A01B01 | 146.138.83.200 | | S18635 |
| Souders.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00104BD38146 | 146.138.84.116 | c-209 | s81861 |
| Sparkman.CR-50.CR.C | Yes | Yes | <N/A> | Yes | Yes | 00110900:0020AF25B81A | 146.138.84.106 | C-248 | S88551 |
| Squires.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF3FF5BC | | | |
| Stewartf.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00608CCD547C | | c277 | s899968 |
| Strahler.CR-10.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7FCAB2F | 146.138.83.202 | | |
| Susans.CR-60.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF148450 | | | |
| Sweeney.CR-30.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0060080D618C | 146.138.83.203 | c-178 | s15290 |
| Sweeneyd.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00608C86A175 | 146.138.84.105 | c-220 | s84260 |
| Tayler.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF2650A6 | 146.138.84.104 | c-280 | s92564 |
| Taylorb.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF07061D | 146.138.82.109 | | |
| Taylorb.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:00608CCCA122 | 146.138.83.241 | C-219 | S95108 |
| Tengan.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF26780D | 146.138.84.103 | c-222 | s87334 |
| Tengan.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:00104BD38153 | 146.138.84.103 | | |
| Thomasja.CR-40.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:00600805D3EC | | D-S27 | S14484 |
| Tyer.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0008C7206C1C | 146.138.82.154 | 4a-133 | s21119 |
| Uhlig.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0008C78C2E7F | | | |
| Uzzell.CR-20.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF32562E | 146.138.83.204 | d-119 | s91732 |
| Valentil.CR-60.CR.C | Yes | Yes | Yes | Yes | Yes | 00000000:0008C7C0C32E | 146.138.83.235 | E-160 | S18494 |
| Vasquez.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00608CC889D0 | 146.138.83.251 | | |
| Vickers.CR-10.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF1785A6 | 146.138.83.208 | d-224 | s86317 |
| Waret.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00110900:0008C79AEB3A | | | |
| Waters.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:006097A42449 | | 41-085 | s12989 |
| Watsons.CR-1_3.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00608CCAC84D | | | |
| White.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF378516 | 146.138.84.148 | e-261 | s88549 |

| Node Name | Can RTC Roll to Leap 2000? | Can RTC Roll to Leap 2004? | Can RTC Set to 2000? | Can RTC Set to Leap 2000? | Can RTC Set to Leap 2004? | Network Address | TCP/IP Address | Room Number | Tag Number |
|---|---|---|---|---|---|---|---|---|---|
| Williamd.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00210400:00104BD38152 | | | |
| Willpatr.CR-50.CR.C | Yes | Yes | Yes | Yes | Yes | 00110900:0020AF0889A0 | 146.138.83.116 | | |
| Wilsona.CR-50.CR.CF | Yes | Yes | Yes | Yes | Yes | 00110900:0008C78C8765 | | e268 | s92535 |
| Wilsonh.CR-60.CR.CF | Yes | Yes | Yes | Yes | Yes | 00000000:00609770D886 | 146.138.83.233 | e-154 | s95563 |
| Womack.CR-50.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00000000:0020AF3133D5 | | | |
| Wong.CR-10.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF32556C | 146.138.82.144 | | |
| Yared.CR-1_3.CR.CFO | Yes | Yes | Yes | Yes | Yes | 00210400:0020AF3FF5D6 | 146.138.82.212 | 4a107 | S92449 |

# Appendix B Test Plans and Check-off Sheets

# B.1 Network Operating Systems and Operating Systems

# B.1.1 NOS / OS Test Plan

# 1 Critical Date Values for Year 2000 Testing

The following dates can be tested for proper operation:
1. 0000-00-00 Special Value
2. 1999-09-09 Special Value
3. 1999-12-31 Special Value, Rollover, Reboot
4. 2000-01-01 Day of Week, Day of Year
5. 2000-02-28 Rollover, Reboot
6. 2000-02-29 Rollover, Reboot, Day of Week
7. 2000-03-01 Day of Week

# 2 Detailed NOS / OS Test Plan

# 2.1 Rollover, Reboot, Day of Week Tests

The rollover test checks for proper handling of the date transition from 1999 to 2000 without manual intervention. Based on actual tests several different results have been observed as examples of incorrect handling of the transition from 1999 to 2000. Many systems used 2-digit dates and the result may be a rollover to year 100, sometimes the 19 is assumed and the result is the year 19100. For other unknown reasons the years 2001, 2028, and non-printable characters have been observed. The effect of incorrect date calculations may include negative numbers.

The reboot test checks for correct date & time storage during power cycles of the system. The system may function correctly when the time is set ahead, but revert to another time and date when the power is cycled. Many PC's revert to 1980 or 1984 when rebooted after the year 2000.

The day of the week may be incorrectly calculated. Systems should display the day of the week of January 1, 2000 as Saturday, not Monday which may mean January 1, 1900.

## 2.1.1 Rollover - 1999 to 2000 - Power On

Test:
Set the date to 31 Dec. 1999.
Set the time to 23:59 (11:59 p.m.).
Observe the system date after 00:00 am
Expected Result:
The system clock advances into the year 2000 and continues normally.

## 2.1.2 Day of Week

Test:
Set the date to 1 Jan 2000.
Power down the system.
Power up the system.
Observe the system date
Expected Result:
The system clock still displays the year 2000 and operates normally.
*Note: Many personal computers fail either both or the first of these tests and reset themselves to 04 January 1980, or some other past date, whenever they reboot, if the CMOS real time clock says the year is 00.*

## 2.1.3 Reboot - Date Retention

Test:
Set the date to 1 Jan 2000.
Power down the system.
Power up the system.
Observe the system date
Expected Result:
The system clock still displays the year 2000 and operates normally.
*Note: Many personal computers fail either both or the first of these tests and reset themselves to 04 January 1980, or some other past date, whenever they reboot, if the CMOS real time clock says the year is 00.*

## 2.1.4 Rollover - 1999 to 2000 - Power Off

Test:
Set the date to 31 Dec. 1999.

Set the time to 23:50 (11:50 p.m.).
Power down the system before it can roll over to year 2000
Wait until after midnight with the power off.
Power up the system.
Observe the system date
Expected Result:
The system clock advances into the year 2000 and operates normally.

## 2.2 Manual Date Set Test

This test checks for correct date & time entry to initialize the system clock. The "set system date" function may operate incorrectly when the time is set ahead, not allow entry over a certain date range, revert to another time and date when set. Some PCs revert to a default date (1980 or 1984) when set to a date in the year 2000. Some systems have multiple date set functions; for a PC the date may be set using the CMOS Setup program at power on, using a DOS date function, using a windows clock or control panel interface. The tests in this section should be executed on all date set functions for the system.

## 2.2.1 Date Set - 1 Jan 2000

Test:
Set the date to 1 Jan 2000.
Observe the system date
Expected Result:
The date should be Saturday, 1 Jan 2000.

## 2.2.2 Date Set - Date Retention

Check to insure that the date set function sets the real-time clock not just the systems virtual clock.
Test:
With the Date still in the year 2000 power down the system.
Power up the system.
Observe the system date
Expected Result:
The system clock still displays the year 2000 and operates normally.

## 2.2.3 Date Set - 29 Feb. 2000

Test:
Set the date to 29 Feb. 2000.
Observe the system date
Expected Result:
The date should be Tuesday 29 Feb. 2000.

## 2.3 Leap Year Test

The leap year test checks the logic which calculates valid dates for leap year. The year 2000 leap year calculation is more complex because multiple exceptions apply to the calculation leading to greater opportunities for error.
*It is a leap year*
*\* if the year is divisible by four,*
*\* if the year ends in 00, it is not a leap year,*
*\* if the year is divisible by 400, then it is a leap year,*
*\* if the year is 3600, it is not a leap year.*

## 2.3.1 Leap Year - Rollover 2/28 - Power On

Test:
Set the date to Monday 28 Feb. 2000.
Set the time to 23:59 (11:59 p.m.).
Observe the system date after midnight
Expected Result:
The date should be Tuesday 29 Feb. 2000.

## 2.3.2 Leap Year - Reboot 2/29

Test:
Set the date to 29 Feb. 2000.
Power down the system.
Power up the system.
Observe the system date
Expected Result:
The date should be Tuesday 29 Feb. 2000.

## 2.3.3 Leap Year - Rollover 2/29 - Power On

Test:
Set date to 29 Feb 2000
Set the time to 23:59 (11:59 p.m.).
Observe the system date after 00:00 am
Expected Result:
The date should be Wednesday 1 March 2000.

## 2.4 Date Window Tests

Windowing date systems assume the first 2 digits of a 4-digit year to be 20 for values below the switch value and 19 for values above the switch value. An example switch value of 50 provides for a range of 1951 to 2049. If the 2-digit year is greater than 50 the year is assumed to be 19xx. That is, 84 is greater than the switch value so the year is 1984. If the 2-digit year is less than 50 the year is assumed to be 20xx. That is, 34 is less than the switch value so the year is 2034. When two integrated systems share date information in this format be sure to test the interface at the boundary conditions. Is the behavior specified when the year is the switch value? Do both sides of an interface switch the same way?

## 2.4.1 Date Window Test - Below Limit

Test:
Observe the configured date limit.
Change the current date to one year below the limit
Observe a 4-digit date
Expected Result:
The date assumes 20xx

## 2.4.2 Date Window Test - Above Limit

Test:
Observe the configured date limit.
Change the current date to one year above the limit
Observe a 4-digit date
Expected Result:
The date assumes 19xx

## 2.4.3 Date Window Test - Change Limit

Test:
Change the configurable date limit to 2004
Observe the configured date limit
Expected Result:
Limit has been changed to 2004
(repeat the above (2005) and below (2003) limit tests to confirm the limit has changed)

## 2.5 Arithmetic Date Tests

If dates are used in any calculations, test for correct operation. The following list is intended to help identify functions which should be checked:
Period calculations
Financial functions based on a time period
Shelf life calculations
Time Remaining

## 2.5.1 Days in 2000

Test:
Create a period calculation using 1-Jan-2000 as the start date and 31-Dec-2000 as the end date.
Expected Result:
The year 2000 has 366 days.

## 2.5.2 Days across 1999/2000 Boundary

Test:
Create a period calculation using 1-Dec-1999 as the start date and 31-Jan-2000 as the end date.
Expected Result:
The period ( (31 January 2000)- (1 December 1999) ) has 61 days.

## 2.5.3 Days across Leap Year

Test:
Create a period calculation using 1-Feb-2000 as the begin date and 1-Mar-2000 as the end date.
Expected Result:
The month of February has 29 days.

## 2.6 Special Value Test

The special value test checks for usage of values in date fields for special purposes that are not dates. An example is special handling of the date September 9, 1999 which may be used as a special code for software license expiration dates, or never expires codes, and/or errors. Systems integrated to higher level systems should include the special value tests. The special values should include the date values 9-9-99, 0-0-00, x-x-9999. This test primarily applies to applications which create records containing the current date as a time or data field, such as database applications or systems which maintain historical data
.
Test:
Set the current date to a special value ( 9-9-99, 9-9-1999, 0-0-00, 0-0-0000 )
Observe the number of records in a test file at the start of the test
Using the application under test, create a new record that contains the current date.
Expected Result:
Observe that the application was able to create the test record.
Observe that the test record is included in displays or reports as applicable.
Observe that the end of file continues to function correctly. ( number of records correct? )
Observe that the test record can be deleted from the system.
Example:
Not terminating an expired software license.

## 2.7 Audit Log Test

This test checks for problems with audit logging systems. This test primarily applies to systems which include the capability to audit user activity or network transactions.

Test:
Set the date of the system under test to a date beyond January 1, 2000.
Create an event or choose a time such that the system will attempt to create a file.
Expected Result:
Verify that the new file was created.
Verify that time stamped information is valid inside the audit log file.

## 2.8 Report Tests

The report test should include sorting and retrieving, sorting and merging, searching, indexing on either disk file or database table. The report tests apply to systems which display data sorted by time and date. One test is to query for all items from now until 12-31-1999 and observe the results, then query for all items from now until 1-2-2000 and observe the results, example failures observed returned no records on the second query.

## 2.8.1 Report - Query

Test:
Set the date of the system under test to a date beyond January 10, 2000.
Create new data by forcing some system event which will create test records.
Set the date to a date beyond March 1, 2000.
Create a new report containing the Year 2000 data by choosing four time spans:
a) November 15, 1999 to December 31, 1999. ( 1999 data )
b) November 15, 1999 to March 1, 2000. ( all data )
c) January 1, 2000 to March 1, 2000. ( 2000 data )
d) February 1, 2000 to March 1, 2000. ( no data )
Expected Result:
Verify that the report with all data, b) contained all the data in the report.
Verify that the data was ordered correctly in the report.
Verify that the report with no data, d) executed correctly and no data was printed in the report.

## 2.8.2 Report - Sort

Test:
Set the date to a date beyond January 1, 2000.
Create new data by forcing some system event which will create test records.
Create a new report containing the Year 2000 data by choosing a valid time span.
Expected Result:
Verify that the new data was ordered correctly in the report.

## 2.8.3 Report - Merge

Test:
Set the date to a date beyond January 1, 2000.
Create new data by forcing some system event which will create test records.
Create a new report containing the Year 2000 data by merging new data.
Expected Result:
Verify that the new data was merged correctly in the report.

## 2.8.4 Report - Search

Test:
Query or Search for an existing record created in the year 1999 with the current time in the year 1999
Query or Search for an existing record created in the year 1999 with the current time in the year 2000
Query or Search for an existing record created in the year 2000 with the current time in the year 2000
Expected Result:
Verify that all records are found as expected.

# B.1.2 NOS Check-off Sheets

# B.1.2.1 Check-Off Sheet - Netware 5.0

<table>
<tr><td colspan="5" align="center"><strong>CR LAN / WAN</strong><br><strong>Year 2000 Component Test Report Form</strong></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td><strong>Product Tested /<br>Category</strong></td><td></td><td colspan="3"><strong>Hardware/Software Configuration</strong></td></tr>
<tr><td><strong>Netware 5.00 /<br>Network Operating System</strong></td><td></td><td colspan="3"><strong>Compaq 3000</strong></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td><strong>Date / Time</strong></td><td></td><td colspan="3"><strong>Tester (s)</strong></td></tr>
<tr><td><strong>Jan. 7, 1999 10:30 AM</strong></td><td></td><td colspan="3"><strong>Kent Klemm</strong></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td align="center"><strong>Test Name</strong></td><td align="center"><strong>Results</strong></td><td align="center"><strong>Effect</strong></td><td colspan="2" align="center"><strong>Result Comments</strong></td></tr>
<tr><td><strong>2.1 Rollover, Reboot, Day of Week Tests</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2"></td></tr>
<tr><td><strong>2.1.1 Rollover - 1999 to 2000 - Power on</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">SET TIME = 12/31/99;<br>SET TIME = 23:59</td></tr>
<tr><td><strong>2.1.2 Day of Week</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">Day of Week is Saturday</td></tr>
<tr><td><strong>2.1.3 Reboot - Date retention</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">SET TIME = 1/1/2000;<br>DOWN</td></tr>
<tr><td><strong>2.1.4 Rollover - 1999 to 2000 - Power Off</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">SET TIME = 12/31/99;<br>SET TIME = 23:59; DOWN</td></tr>
<tr><td><strong>2.2 Manual Date Set Test</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2"></td></tr>
<tr><td><strong>2.2.1 Date Set - 1 Jan 2000</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">SET TIME - 1/1/00</td></tr>
<tr><td><strong>2.2.2 Date Set - Date retention</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">DOWN;<br>Date is still Saturday, Jan. 1, 2000</td></tr>
<tr><td><strong>2.2.3 Date Set - 29 Feb. 2000</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">SET TIME = 2/29/00</td></tr>
<tr><td><strong>2.3 Leap Year Test</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2"></td></tr>
<tr><td><strong>2.3.1 Leap Year - Rollover 2/28</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">SET TIME = 2/28/00;<br>SET TIME = 23:59;<br>Server time rolled properly</td></tr>
<tr><td><strong>2.3.2 Leap Year - Reboot 2/29</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">DOWN</td></tr>
<tr><td><strong>2.3.3 Leap Year - Rollover 2/29</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2"></td></tr>
<tr><td><strong>2.4 Date Window Tests</strong></td><td><strong>PASS</strong></td><td></td><td colspan="2">Valid years for "SET TIME = "are 1980 - 2079.<br>Years entered as 79 (or xx79) will result in system date of 2079.<br>Years entered as 80 (or xx80) will result in system date of 1980.<br>Years entered in the range of 80 - 99 will result in 1980 - 1999;<br>years entered in the range of 00 - 79 will result in 2000 - 2080.</td></tr>
</table>

# B.1.2.1 Check-Off Sheet - Netware 5.0

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| 2.4.1 Date Window Test - Below Limit | PASS | | |
| 2.4.2 Date Window Test - Above Limit | PASS | | |
| 2.4.3 Date Window Test - Change Limit | N/A | | Date windowing is not configurable. |
| 2.5 Arithmetic Date Tests | PASS | | |
| 2.5.1 Days in 2000 | PASS | | System time was adjusted 366 days using "+8784:00:00 at Jan. 1, 2000 12:17 am"; system time was reset to Monday, Jan. 1, 2001. |
| 2.5.2 Days across 1999/2000 Boundary | PASS | | System time was adjusted 61 days using "+1464:00:00 at Dec. 1, 1999 12:15 am"; system time was reset to Jan. 3, 2000. |
| 2.5.3 Days across leap year | PASS | | System time was adjusted 29 days using "+696:00:00 at Feb. 1, 2000 12:21 am" ; system time was reset to Mar. 1, 2000. |
| 2.6 Special Value Test | PASS | | "Set time = 0/0/00" resulted in date of 1/1/2000. "Set time = 0/0/0000" resulted in date of 1/1/2000. "Set time = 9/9/99" resulted in date of  9/9/99. |
| 2.7 Audit Log Test | PASS | | DSREPAIR.LOG |
| 2.8 Report Tests | N/A | | |
| 2.8.1 Report - Query | N/A | | |
| 2.8.2 Report - Sort | N/A | | |
| 2.8.3 Report - Merge | N/A | | |
| 2.8.4 Report - Search | N/A | | |
| 2.9 Product Specific Test | PASS | | |
| 2.9.1 SET TIME Command | PASS | | "SET TIME = 1/2/2000" and "SET TIME - 1/2/00" both resulted in Jan. 2, 2000. "1/1/00" resulted in 1/1/2000 "1/1/79" resulted in 1/1/2079. "1/1/80" resulted in 1/1/1980. "1/1/1979" resulted in 1/1/2079. 1/1/2080" resulted in 1/1/1980. "13/1/1999" resulted in 1/1/1999. "1/32/99" resulted in 1/31/1999. |

# B.1.2.2 Check-Off Sheet - Netware 4.11

| CR LAN / WAN | | | | |
|---|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | | |
| | | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | | |
| Netware 4.11 (IntraNetware Support Pack v6.0) / Network Operating System | | Compaq 3000 | | |
| | | | | |
| **Date / Time** | | **Tester (s)** | | |
| | | | | |
| **Jan. 5, 1999 8:00 AM** | | **Kent Klemm** | | |
| | | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** | |
| **2.1 Rollover, Reboot, Day of Week Tests** | PASS | | | |
| **2.1.1 Rollover - 1999 to 2000 - Power on** | PASS | | | |
| **2.1.2 Day of Week** | PASS | | | |
| **2.1.3 Reboot - Date retention** | PASS | | | |
| **2.1.4 Rollover - 1999 to 2000 - Power Off** | PASS | | | |
| **2.2 Manual Date Set Test** | PASS | | | |
| **2.2.1 Date Set - 1 Jan 2000** | PASS | | | |
| **2.2.2 Date Set - Date retention** | PASS | | | |
| **2.2.3 Date Set - 29 Feb. 2000** | PASS | | System time was set using "Set time = 2/29/00" | |
| **2.3 Leap Year Test** | PASS | | | |
| **2.3.1 Leap Year - Rollover 2/28** | PASS | | | |
| **2.3.2 Leap Year - Reboot 2/29** | PASS | | | |
| **2.3.3 Leap Year - Rollover 2/29** | PASS | | | |
| **2.4 Date Window Tests** | N/A | | Valid years for "SET TIME = "are 1980 - 2079. Years entered as 79 (or xx79) will result in system date of 2079. Years entered as 80 (or xx80) will result in system date of 1980. Years entered in the range of 80 - 99 will result in 1980 - 1999; years entered in the range of 00 - 79 will result in 2000 - 2080. | |
| **2.4.1 Date Window Test - Below Limit** | PASS | | | |

# B.1.2.2 Check-Off Sheet - Netware 4.11

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| 2.4.2 Date Window Test - Above Limit | PASS | | |
| 2.4.3 Date Window Test - Change Limit | N/A | | Date windowing is not configurable. |
| 2.5 Arithmetic Date Tests | PASS | | |
| 2.5.1 Days in 2000 | PASS | | System time was adjusted 366 days using "+8784:00:00 at Jan. 1, 2000 12:17 am"; system time was reset to Monday, Jan. 1, 2001. |
| 2.5.2 Days across 1999/2000 Boundary | PASS | | System time was adjusted 61 days using "+1464:00:00 at Dec. 1, 1999 12:15 am"; system time was reset to Jan. 3, 2000. |
| 2.5.3 Days across leap year | PASS | | System time was adjusted 29 days using "+696:00:00 at Feb. 1, 2000 12:21 am" ; system time was reset to Mar. 1, 2000. |
| 2.6 Special Value Test | PASS | | "Set time = 0/0/00" resulted in date of 1/1/2000. "Set time = 0/0/0000" resulted in date of 1/1/2000. "Set time = 9/9/99" resulted in date of 9/9/99. |
| 2.7 Audit Log Test | PASS | | DSREPAIR.LOG |
| 2.8 Report Tests | N/A | | |
| 2.8.1 Report - Query | N/A | | |
| 2.8.2 Report - Sort | N/A | | |
| 2.8.3 Report - Merge | N/A | | |
| 2.8.4 Report - Search | N/A | | |
| 2.9 Product Specific Test | PASS | | |
| 2.9.1 SET TIME Command | PASS | | "SET TIME = 1/2/2000" and "SET TIME - 1/2/00" both resulted in Jan. 2, 2000. "1/1/00" resulted in 1/1/2000 "1/1/79" resulted in 1/1/2079. "1/1/80" resulted in 1/1/1980. "1/1/1979" resulted in 1/1/2079. 1/1/2080" resulted in 1/1/1980. "13/1/1999" resulted in 1/1/1999. "1/32/99" resulted in 1/31/1999. |

# B.1.2.3 Check-Off Sheet - Windows NT Server 4.0

| CR LAN / WAN | | | | |
|---|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | | |
| | | | | |
| **Product Tested / Category** | | | **Hardware/Software Configuration** | |
| **Windows NT Server 4.0 (Service Pack 4) / Network Operating System** | | | **Compaq 3000** | |
| | | | | |
| **Date** | | | **Tester (s)** | |
| **Dec. 31, 1998 12:20 PM** | | | **Kent Klemm/Mark King/Jennifer Jones** | |
| **Test Name** | **Results** | **Effect** | **Result Comments** | |
| **2.1 Rollover, Reboot, Day of Week Tests** | PASS | | Dates were set using Date/Time in Control Panel | |
| **2.1.1 Rollover - 1999 to 2000 - Power on** | PASS | | | |
| **2.1.2 Day of Week** | PASS | | | |
| **2.1.3 Reboot - Date retention** | PASS | | | |
| **2.1.4 Rollover - 1999 to 2000 - Power Off** | PASS | | | |
| **2.2 Manual Date Set Test** | PASS | | | |
| **2.2.1 Date Set - 1 Jan 2000** | PASS | | | |
| **2.2.2 Date Set - Date retention** | PASS | | | |
| **2.2.3 Date Set - 29 Feb. 2000** | PASS | | | |
| | | | | |
| **2.3 Leap Year Test** | PASS | | | |
| **2.3.1 Leap Year - Rollover 2/28** | PASS | | | |
| **2.3.2 Leap Year - Reboot 2/29** | PASS | | | |
| **2.3.3 Leap Year - Rollover 2/29** | PASS | | | |
| **2.4 Date Window Tests** | PASS | | | |
| **2.4.1 Date Window Test - Below Limit** | PASS | | "Date 1-1-79" sets to 01/01/2079 | |
| **2.4.2 Date Window Test - Above Limit** | PASS | | "Date 1-1-80" sets to 01/01/1980 | |
| **2.4.3 Date Window Test - Change Limit** | N/A | | | |
| **2.4 Arithmetic Date Tests** | N/A | | | |

# B.1.2.3 Check-Off Sheet - Windows NT Server 4.0

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| 2.4.1 Days in 2000 | N/A | | |
| 2.4.2 Days across 1999/2000 Boundary | N/A | | |
| 2.4.3 Days across leap year | N/A | | |
| 2.6 Special Value Test | N/A | | |
| 2.7 Audit Log Test | N/A | | Entries were added to the event log, listed in the sequence in which they occurred with dates in mm/dd/yy format. |
| 2.8 Report Tests | N/A | | |
| 2.8.1 Report | N/A | | |
| 2.8.2 Report - Sort | N/A | | |
| 2.8.3 Report - Merge | N/A | | |
| 2.8.4 Report - Search | PASS | | |
| 2.9 Product Specific Test | PASS | | |
| 2.9.1 File Manager (WINFILE.exe) | PASS | | When you select View/Details, the date is displayed as mm/dd/yy.The dates are displayed correctly.with a 2-digit year. |
| 2.9.2 NT Explorer | PASS | | NT Explorer (view/details) sorts by date correctly, and displays correctly the 2-digit date year. |
| 2.9.3 DATE in Command Line | PASS | | If a 2-digit year in the range of 00 - 79 is entered, the system assumes 2000-2079. If a 2-digit date in the range of 80-99 is entered, the system assumes 1980-1999. Only 4-digit years in the range of 1980-2079 can be entered. |
| 2.9.4 Date/Time in Control Panel | PASS | | Years can be entered in the range of 1980-2099 |
| 2.9.5 XCOPY in Command Line | FAIL | MINOR | Either 2-digit or 4-digit years can be entered in the /D:date parameter. Two valid dates which were not accepted were: 12-31-99 and 2-29-2000. |
| 2.9.6 Find File | PASS | | 2-digit dates can be entered between 1979 and 2099, and are treated correctly. |

# B.1.3 OS Check-off Sheets

# B.1.3.1 Check-Off Sheets - MS DOS 6.22

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | |
| **DOS 6.22/ Operating System** | | **DGI (S89957) AMI BIOS** | |
| | | | |
| **Date / Time** | | **Tester (s)** | |
| **Dec. 30, 1998  2:06:00 PM** | | **Kent Klemm** | |
| | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| **2.1 Rollover, Reboot, Day of Week Tests** | **PASS** | | |
| **2.1.1 Rollover - 1999 to 2000 - Power on** | **PASS** | | |
| **2.1.2 Day of Week** | **PASS** | | |
| **2.1.3 Reboot - Date retention** | **PASS** | | |
| **2.1.4 Rollover - 1999 to 2000 - Power Off** | **PASS** | | |
| **2.2 Manual Date Set Test** | **PASS** | | |
| **2.2.1 Date Set - 1 Jan 2000** | **PASS** | | |
| **2.2.2 Date Set - Date retention** | **PASS** | | |
| **2.2.3 Date Set - 29 Feb. 2000** | **PASS** | | To set the system date after Jan. 1, 2000, it was necessary to enter a 4-digit year. (ie; DATE 01-01-2000) |
| **2.3 Leap Year Test** | **PASS** | | |
| **2.3.1 Leap Year - Rollover 2/28** | **PASS** | | |
| **2.3.2 Leap Year - Reboot 2/29** | **PASS** | | |
| **2.3.3 Leap Year - Rollover 2/29** | **PASS** | | |
| **2.4 Date Window Tests** | **N/A** | | |
| **2.4.1 Date Window Test - Below Limit** | **N/A** | | |
| **2.4.2 Date Window Test - Above Limit** | **N/A** | | |
| **2.4.3 Date Window Test - Change Limit** | **N/A** | | |
| **2.5 Arithmetic Date Tests** | **N/A** | | |

# B.1.3.1 Check-Off Sheets - MS DOS 6.22

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **2.5.1 Days in 2000** | **N/A** | | |
| **2.5.2 Days across 1999/2000 Boundary** | **N/A** | | |
| **2.5.3 Days across leap year** | **N/A** | | |
| **2.6 Special Value Test** | **PASS** | | Entry of "DATE 0-0-00" and "DATE 0-0-0000" returned the error message "Invalid Date". Entry of 9-9-99 and 9-9-1999 was allowed. |
| **2.7 Audit Log Test** | **N/A** | | |
| **2.8 Report Tests** | **N/A** | | |
| **2.8.1 Report Query** | **PASS** | | Execution of DIR command displayed all relevant data, including files created in year 2000. Dates were displayed with 2-digit year. |
| **2.8.2 Report - Sort** | **PASS** | | Performed "DIR /OD" and "DIR /O-D"; the files were correctly sorted, displaying 2-digit years (eg; 02-29-00) |
| **2.8.3 Report - Merge** | **PASS** | | Added file with 02-02-2000 date, then executed DIR command. The new file appeared in the display. |
| **2.8.4 Report - Search** | **N/A** | | |
| **3.9 Product Specific Test** | **N/A** | | |
| **3.9.1 DATE in Command Line** | **PASS** | | If a 2-digit year in the range of 00 -79 is entered, "Invalid date" is returned. Examples of results using DATE command: 1. accepts 1-1-2000 as valid 2. accepts 12-31-99 as 1999 3. accepts 1-1-79 as 2079 4. accepts 1-1-80 as 1980 |
| | | | Entry of "DATE 1-1-2080" returns "Invalid Date" error, but the system will roll to the year 2080 from Dec. 31, 2079. ( 2-digit dates in the range of 80-99 imply dates of 1980 - 1999; dates of 2000-2079 must be entered as 4-digit dates.) * Can only set dates from 1980-2079 |

# B.1.3.1 Check-Off Sheets - MS DOS 6.22

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **3.9.2 XCOPY in Command Line** | **PASS** | | XCOPY /D:date correctly copies files with a date on or after the specified date. |

# B.1.3.2 Check-Off Sheets - Windows NT Workstation 4.0

| CR LAN / WAN | | | | |
|---|---|---|---|---|
| Year 2000 Component Test Report Form | | | | |
| | | | | |
| **Product Tested / Category** | | | **Hardware/Software Configuration** | |
| Windows NT 4.0 Workstation (Service Pack 4) / Operating System | | | Compaq 4000 (S18634) | |
| | | | | |
| **Date / Time** | | | **Tester (s)** | |
| Jan. 4, 1999 10:00 AM | | | Kent Klemm | |
| | | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** | |
| 2.1 Rollover, Reboot, Day of Week Tests | PASS | | | |
| 2.1.1 Rollover - 1999 to 2000 - Power on | PASS | | Dates were set using Date/Time in Control Panel | |
| 2.1.2 Day of Week | PASS | | | |
| 2.1.3 Reboot - Date retention | PASS | | | |
| 2.1.4 Rollover - 1999 to 2000 - Power Off | PASS | | | |
| 2.2 Manual Date Set Test | PASS | | | |
| 2.2.1 Date Set - 1 Jan 2000 | PASS | | | |
| 2.2.2 Date Set - Date retention | PASS | | | |
| 2.2.3 Date Set - 29 Feb. 2000 | PASS | | | |
| 2.3 Leap Year Test | PASS | | | |
| 2.3.1 Leap Year - Rollover 2/28 | PASS | | | |
| 2.3.2 Leap Year - Reboot 2/29 | PASS | | | |
| 2.3.3 Leap Year - Rollover 2/29 | PASS | | | |
| 2.4 Date Window Tests | N/A | | | |
| 2.4.1 Date Window Test - Below Limit | N/A | | | |
| 2.4.2 Date Window Test - Above Limit | N/A | | | |
| 2.4.3 Date Window Test - Change Limit | N/A | | | |
| 2.5 Arithmetic Date Tests | N/A | | | |

# B.1.3.2 Check-Off Sheets - Windows NT Workstation 4.0

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **2.5.1 Days in 2000** | **N/A** | | |
| **2.5.2 Days across 1999/2000 Boundary** | **N/A** | | |
| **2.5.3 Days across leap year** | **N/A** | | |
| **2.6 Special Value Test** | **PASS** | | System would not accept 1/0/00 or 0/0/2000; it accepted 9/9/99 and 9/9/1999 as Sept. 9, 1999. |
| **2.7 Audit Log Test** | **N/A** | | |
| **2.8 Report Tests** | **N/A** | | |
| **2.8.1 Report - Query** | **N/A** | | |
| **2.8.2 Report - Sort** | **N/A** | | |
| **2.8.3 Report - Merge** | **N/A** | | |
| **2.8.4 Report - Search** | **N/A** | | |
| **2.9 Product Specific Test** | | | |
| **2.9.1 File Manager (WINFILE.exe)** | **PASS** | | When you select View/Details, the date is displayed as mm/dd/yy.The dates are displayed correctly, with a 2-digit year. |
| **2.9.2 NT Explorer** | **PASS** | | NT Explorer (View/Details) sorts by date correctly, and displays correctly the 2-digit date year. |
| **2.9.3 DATE in Command Line** | **PASS** | | 2-digit years in the range of 80-99 imply dates of 1980 - 1999; dates of 2000-2079 must be entered as 4-digit dates. Using DATE, only dates from 1980 - 2079 can be set. If a 2-digit year in the range of 00 - 79 is entered, "Invalid date" is returned. |
| **2.9.4 Date/Time in Control Panel** | **PASS** | | Years can be entered in the range of 1980-2099). |
| **2.9.5 XCOPY in Command Line** | **FAIL** | **MINOR** | Either 2-digit or 4-digit years can be entered in the /D:date parameter. Two valid dates which were not accepted were: 12-31-99 and 2-29-2000. |
| **2.9.6 Find File** | **PASS** | | 2-digit dates can be entered between 1979 and 2099, and are treated correctly |

# B.1.3.3 Check-Off Sheets - Windows 95

| CR LAN / WAN | | | | |
|---|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | | |
| | | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | | |
| **Windows 95 4.00.950.B /** **Operating System** | | **Compaq EN (S26126)** **Pentium Pro** **32.0MB RAM** | | |
| | | | | |
| **Date / Time** | | **Tester (s)** | | |
| **Dec. 30, 1998 3:30 PM** | | **Kent Klemm/Jennifer Jones** | | |
| | | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** | |
| **2.1 Rollover, Reboot, Day of Week Tests** | **PASS** | | | |
| **2.1.1 Rollover - 1999 to 2000 - Power on** | **PASS** | | | |
| **2.1.2 Day of Week** | **PASS** | | | |
| **2.1.3 Reboot - Date retention** | **PASS** | | | |
| **2.1.4 Rollover - 1999 to 2000 - Power Off** | **PASS** | | | |
| **2.2 Manual Date Set Test** | **PASS** | | | |
| **2.2.1 Date Set - 1 Jan 2000** | **PASS** | | | |
| **2.2.2 Date Set - Date retention** | **PASS** | | | |
| **2.2.3 Date Set - 29 Feb. 2000** | **PASS** | | | |
| **2.3 Leap Year Test** | **PASS** | | | |
| **2.3.1 Leap Year - Rollover 2/28** | **PASS** | | | |
| **2.3.2 Leap Year - Reboot 2/29** | **PASS** | | | |
| **2.3.3 Leap Year - Rollover 2/29** | **PASS** | | | |
| **2.4 Date Window Tests** | **N/A** | | | |
| **2.4.1 Date Window Test - Below Limit** | **N/A** | | | |
| **2.4.2 Date Window Test - Above Limit** | **N/A** | | | |
| **2.4.3 Date Window Test - Change Limit** | **N/A** | | | |
| **2.5 Arithmetic Date Tests** | **N/A** | | | |

# B.1.3.3 Check-Off Sheets - Windows 95

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| 2.5.1 Days in 2000 | N/A | | |
| 2.5.2 Days across 1999/2000 Boundary | N/A | | |
| 2.5.3 Days across leap year | N/A | | |
| 2.6 Special Value Test | N/A | | |
| 2.7 Audit Log Test | N/A | | |
| 2.8 Report Tests | N/A | | |
| 2.8.1 Report - Query | N/A | | |
| 2.8.2 Report - Sort | N/A | | |
| 2.8.3 Report - Merge | N/A | | |
| 2.8.4 Report - Search | N/A | | |
| 2.9 Product Specific Test | | | |
| 2.9.1 File Manager | FAIL | MINOR | When you select View/Details the 2-digit year is incorrect when the year is greater than 1999. For example: If the last modified date is: 1. 1/1/2000, it appears as 1/1/:0 2. 2/3/2003, it appears as 2/3/:3 3. 3/5/2036, it appears as 3/5/=6 |
| 2.9.2 Windows Explorer | PASS | | Correctly displays 2-digit year of date. |
| 2.9.3 DATE in Command Line | PASS | | If a 2-digit year in the range of 00 -79 is entered, "Invalid date" is returned. ( 2-digit dates in the range of 80-99 imply dates of 1980 - 1999; dates of 2000-2079 must be entered as 4-digit dates.) |
| 2.9.4 Date/Time in Control Panel | PASS | | Valid years are 1980 - 2099. Either 2 or 4 digit years can be used for entering 1980-1999; 4-digit years must be used for entering 2000-2099. |
| 2.9.5 XCOPY in Command Line | PASS | | XCOPY /D:date correctly copies files with a date on or after the specified date. |

# B.1.3.3 Check-Off Sheets - Windows 95

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **2.9.6 Find File** | Fail | Minor | If 2-digit years are entered they will be translated to valid years. |
| | | | If invalid 4-digit years are entered they will be incorrectly translated. For example: |
| | | | 1) If the year 1936 is entered, it changes to 2064. |
| | | | 2) If the year 1979 is entered, it changes to 2007. |
| | | | |

# B.2 Desktop Applications

# B.2.1 Lotus Notes v4.6

# B.2.1.1 Lotus Notes v4.6 Test Plan

# 1 Lotus Notes Mail Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to insure accurate records of the test are documented on the "Year 2000 Test Report" form. Within each time period to be tested, Mail functions which involved dates will be tested, as well as other Notes Mail features, such as Meetings, Calendar, and ToDos. The time periods to be tested include:

> Dec. 31, 1999,
> Jan. 1, 2000,
> Feb. 29, 2000.

# 2 Mail Tests

# 2.1 Create New Memo

Test:           Within Notes Mail, click on New Memo. Does the date on the memo form display properly?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or
Result:        after should display with a 4-digit year.

# 2.2 Save as Draft

Test:           Create new memo, save as draft. View the draft memo. Does the date on the draft memo display properly?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or
Result:        after should display with a 4-digit year.

## 2.3 Return Receipt

Test:          Create new memo, set options to generate return receipt; send memo. View the return receipt. Does the date display properly?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or

Result:        after should display with 4-digit years.

## 2.4 Forward Memo

Test:          Forward a memo that has been received. View the date on the forwarded memo. Does the date display properly?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or

Result:        after should display with 4-digit years.

# 3 Meetings

## 3.1 Calendar Entry

Test:          Enter various dates (eg, 12/31/99, 1/3/2000, 2/29/2000, 3/1/2000); see how they display; what is the range of acceptable dates?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or

Result:        after should display with a 4-digit year.

## 3.2 Find Free Time

Test:          Enter various dates (eg, 12/31/99, 1/3/2000, 2/29/2000, 3/1/2000); see how they display; what is the range of acceptable dates?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or

Result:        after should display with a 4-digit year.

# 4 Calendar

Calendar functions include Appointments, Invitations, Events, Reminders, and Anniversaries.

Test:        Enter various dates (eg, 12/31/99, 1/3/2000, 2/29/2000, 3/1/2000); see how they display; what is the range of acceptable dates?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or

Result:      after should display with a 4-digit year.

# 5 To Dos

Test:        Enter various dates (eg, 12/31/99, 1/3/2000, 2/29/2000, 3/1/2000); see how they display; what is the range of acceptable dates?

Expected     Dates before the year 2000 should display with a 2-digit year; dates in the year 2000 or

Result:      after should display with a 4-digit year.

# 6 Folders

Test:    When messages are viewed in folders (Inbox, Draft, Sent, Meetings, Calendar, ToDo), do dates display properly? Do dates sort properly?

# B.2.1.2 Lotus Notes v4.6 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | |
| **Lotus Notes 4.6 / Desktop Applications** | | **Compaq Deskpro EN / Windows 95 (4.00.950 B)** | |
| | | | |
| **Date** | | **Tester (s)** | |
| **January 19, 1999; 2:00 pm** | | **Kent Klemm** | |
| | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| | | | |
| **Time Period One (Dec. 31, 1999)** | | | |
| | | | |
| **2 Mail Tests** | | | |
| | | | |
| **2.1 Create New Memo** | **PASS** | | Date displayed as "12/31/99" |
| **2.2 Save as Draft** | **PASS** | | Date displayed as "12/31/99" |
| **2.3 Return Receipt** | **PASS** | | Date displayed as Today |
| **2.4 Forward Memo** | **PASS** | | Date displayed as "12/31/99" |
| **3 Meetings** | | | |
| **3.1 Calendar Entry** | **PASS** | | 1/3/00 is transformed to 1/3/2000, 1/3/99 -> 1/3/1999, 12/30/2000 -> 2/29/2000, 2/29/1999 -> 2/29/2000 Years which can be entered range from 0100 - 9999. If an invalid date is entered, it will be changed to a valid date. |
| **3.2 Find Free Time** | **PASS** | | See comment under Calendar Entry above. |
| **4 Calendar** | **PASS** | | See comment under Calendar Entry above. |
| **5 To Dos** | **PASS** | | See comment under Calendar Entry above. |
| **6 Folders** | **PASS** | | Dates display as 12/31/99, and sort properly |
| **Time Period Two (Jan. 1, 2000)** | | | |
| **2 Mail Tests** | | | |
| **2.1 Create New Memo** | **PASS** | | Date displayed as "1/1/2000" |

# B.2.1.2 Lotus Notes v4.6 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| 2.2 Save as Draft | PASS | | Date displayed as "1/1/2000" |
| 2.3 Return Receipt | PASS | | Date displayed as Today |
| 2.4 Forward Memo | PASS | | Date displayed as "1/1/2000" |
| 3 Meetings | | | |
| 3.1 Calendar Entry | PASS | | 1/3/00 is transformed to 1/3/2000, 1/3/99 -> 1/3/1999, 12/30/2000 -> 2/29/2000, 2/29/1999 -> 2/29/2000 Years which can be entered range from 0100 - 9999. If an invalid date is entered, it will be changed to a valid date. |
| 3.2 Find Free Time | PASS | | See comment under Calendar Entry above. |
| 4 Calendar | PASS | | See comment under Calendar Entry above. |
| 5 To Dos | PASS | | See comment under Calendar Entry above. |
| 6 Folders | PASS | | Dates display as 12/31/99, and sort properly |
| Time Period Three (Feb 29, 2000) | PASS | | Date displayed as "2/29/2000" |
| 2 Mail Tests | | | |
| 2.1 Create New Memo | PASS | | Date displayed as "2/29/2000" |
| 2.2 Save as Draft | PASS | | Date displayed as Today |
| 2.3 Return Receipt | PASS | | Date displayed as "2/29/2000" |
| 2.4 Forward Memo | PASS | | Date displayed as "2/29/2000" |
| 3 Meetings | | | |
| 3.1 Calendar Entry | PASS | | 1/3/00 is transformed to 1/3/2000, 1/3/99 -> 1/3/1999, 12/30/2000 -> 2/29/2000, 2/29/1999 -> 2/29/2000 Years which can be entered range from 0100 - 9999. If an invalid date is entered, it will be changed to a valid date. |
| 3.2 Find Free Time | PASS | | See comment under Calendar Entry above. |

# B.2.1.2 Lotus Notes v4.6 Check-Off Sheet

| Test Name | Results | Effect | Result Comments | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| **4 Calendar** | **PASS** | | See comment under Calendar Entry above. | |
| **5 To Dos** | **PASS** | | See comment under Calendar Entry above. | |
| **6 Folders** | **PASS** | | Dates display as 12/31/99, and sort properly | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# B.2.2 MS Word '97

## B.2.2.1 MS Word '97 Test Plan

# 1 MS Word97 Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to insure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing Regional Settings once, and within each time period to be tested: testing the FindFast feature, Insert Date Field feature, Date Windowing, the Table Sort feature, and File Properties. The time periods to be tested include:
        Dec. 31, 1999,
        Jan. 1, 2000,
        Feb. 29, 2000.

# 2 Regional Settings Test

To ensure that this application will provide properly formatted date and time information; the Short Date Style must be set to display the 4-digit year.

| Test: | Go to Start / Settings / Control Panel / Regional Settings / Date. Change the Short Date Style to the 4-digit date format M/D/YYYY; click Apply; then close Regional Settings. Reopen MS Word 97 and click Insert – Field – click Date and Time –click Date – click OK. |
| --- | --- |
| Expected Result: | The date displayed should be in the 4-digit date format. |

# 3 Find Fast Indexing

Find Fast builds indexes to speed the search for documents from the File / Open dialog box.

## 3.1 Create Find Fast Index

| Test: | Go to Start / Settings / Control Panel / Find Fast. (If there is already an index for the C: drive, delete it.) |
| --- | --- |

Create a Fast Find Index by clicking Index / Create Index in and below (C:) and hit OK.
Then, return to Index / Update Index / Information

Expected Result: The creation date shown is in the m/d/yyyy format.

# 3.2 Find Fast Log File

Test: Go to Start / Settings / Control Panel / Find Fast / Index / Indexer Log.

Expected Result: Date entries in log file should be in m/d/yyyy format.

# 4 File Search

# 4.1 Search by Creation Date

Test: Open MS Word 97; create / save / close a file.
Click File / Open; perform a search for the newly created file using Advanced Find / select Creation Date / select Today / Add to List / Find Now.

Expected Result: Verify that the document created "today" was found.

# 4.2 Search by Last Modified Date

Test: Search for files Last Modified today.
Click File / Open / from the Last Modified drop down menu select today.

Expected Result: Verify that the document created "today" was found.

# 4.3 Search by Custom Date Property

Test: Open a Word document;
Set a Custom Date Property by File / Properties; select Custom tab; in Name choose Date Completed; in Type choose Date; in Value enter today's date; click on Add; then OK.
Close the document.
Search for files with Date Completed equal "today":
File / Open / Advanced; under Property select Date Completed; Condition select Today; click on Find Now.

| Expected Result: | Verify that the document with Custom Date Property of Date Completed equal to today was found. |
|---|---|

# 5 Date Window Tests (Table Sort)

Date windowing has to do with how the software interprets 2-digit years in dates. In general, a word processing application enters and stores dates as text, and it is not necessary for the application to interpret or compare dates. An exception to this is the processing of dates when sorting by dates in tables.

When sorting by dates in tables, MS Word 97 assumes a date window of 1930 – 2029. There is no validation of dates in Table/Sort because Table/Sort can interpret/recognize the range of years 1900 – 2035.
Table/Sort can interpret text strings as dates, and sort in chronological, ascending or descending order.

| COLUMN 1 | COLUMN 2 |
|---|---|
| 2/20/2000 | 1/2/2035 |
| 1/2/2030 | 1/2/2030 |
| 3/1/2000 | 1/2/29 |
| 2/30/2000 | 1/2/1930 |
| 2/30/0000 | 1/2/30 |

# 5.1 Invalid Dates

| Test: | Is 2/30/2000 (an invalid date) sorted before 3/1/2000? Select  Table / Sort, then select Column 1 to be Sorted; then indicate by Date; then select Ascending (lowest year to greatest year) Note: The Table / Sort function can sort only one column at a time. |
|---|---|
| Expected Result: | Verify that 2/30/2000 is sorted before the other dates. Invalid dates sort before other dates. |

# 5.2 Date Sorting

| Test: | Dates entered with 2-digit years in tables assume a date window of 1930 – 2029, and dates entered with 4-digit years may not exceed the year 2035. Test to verify the sorting of a mixture of dates with 2-digit and 4-digit years. Select Table / Sort; then select Column 2 to be Sorted; then indicate by Date; then select Descending (greatest to lowest year). |
|---|---|
| Expected Result: | 1/2/2035 –is 1st , 1/2/29 is 2nd  and 1/2/30 is 3rd (all were sorted in correct descending order) in accordance with the Date Window Test Rules above. |

# 6 Insert Date / Time

In tables, in document headers and footers, and in the body of a document, Insert / Date & Time or Insert / Field / Date and Time will insert the current date as text formatted as a date or as a date field that can be updated.

## 6.1 Insert Date / Time in Document Body

Test:          Select Insert / Date and Time, and insert each of the options in the body of the document.

## 6.2 Insert Date / Time in Header

Test:          Select Insert / Date and Time, and insert each of the options in the header of the document.

## 6.3 Insert Date / Time in Footer

Test:          Select Insert / Date and Time, and insert each of the options in the footer of the document.

# 7 File / Document Properties

File properties are details about a file that help identify it, including Created Date, Modified Date, Accessed Date and Printed Date, and customized dates.

## 7.1 File Properties

Test:          Check dates in File Properties by: File / Properties / Statistics to see Created Date, Modified Date, Accessed Date and Printed Date.

Expected       Correct dates, with 4-digit years should appear, such as Friday, January
Result:        22, 1999.

## 7.2 Display Last Modified Date in File / Open

The File / Open document management feature displays a list of files, as well as the date / time of the last modification.

Test:          Confirm that File / Open is able to display correct last modified date.

Expected       Verify above result by clicking File / Open.
Result:        The date and time that the document was last saved should display.

# B.2.2.2 MS Word '97 Check-Off Sheet

| CR LAN / WAN | | | | |
|---|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | | |
| | | | | |
| **Product Tested / Category** | | | **Hardware/Software Configuration** | |
| **MicroSoft Word 97 / Desktop Applications** | | | **Compaq Deskpro EN / Windows 95 (4.00.950 B)** | |
| | | | | |
| **Date** | | | **Tester (s)** | |
| **January 19, 1999; 12:00 pm** | | | **Kent Klemm** | |
| | | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** | |
| | | | | |
| **Regional Settings Test** | **PASS** | | Short Date Style in Regional Settings was changed to m/d/yyyy; "Insert / Field / Date and Time" in Word generated "12/31/1999" as expected | |
| **Time Period One (Dec. 31, 1999)** | | | | |
| **3 Find Fast Indexing** | | | | |
| **3.1 Create Index** | **PASS** | | Index was successfully created; creation date shown in Update Index / Information = "12/31/1999" | |
| **3.2 Log File** | **PASS** | | Date entries in log file after regional settings were changed appear as "12/31/1999" | |
| **4 File Search** | | | | |
| **4.1 Search by Creation Date** | **PASS** | | | |
| **4.2 Search by Last Modified Date** | **PASS** | | | |
| **4.3 Search by Custom Date Property** | **PASS** | | | |
| **5 Date Window Tests (Table / Sort)** | | | | |
| **5.1 Invalid Dates** | **PASS** | | | |
| **5.2 Date Sorting** | **PASS** | | | |
| **6 Insert Date / Time** | | | | |
| **6.1 Document** | **PASS** | | | |
| **6.2 Header** | **PASS** | | | |
| **6.3 Footer** | **PASS** | | | |

# B.2.2.2 MS Word '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **7 Check File / Document Properties** | | | |
| **7.1 File Properties** | **PASS** | | |
| **7.2 Last Modified Date in File/Open** | **PASS** | | |
| **Time Period Two (Jan. 1, 2000)** | | | |
| **3 Find Fast Indexing** | | | |
| **3.1 Create Index** | | | Index was successfully created; creation date shown in Update Index / Information = "1/1/2000" |
| **3.2 Log File** | | | Date entries in log file after regional settings were changed appear as "1/1/2000" |
| **4 File Search** | | | |
| **4.1 Search by Creation Date** | **PASS** | | |
| **4.2 Search by Last Modified Date** | **PASS** | | |
| **4.3 Search by Custom Date Property** | **PASS** | | |
| **5 Date Window Tests (Table / Sort)** | | | |
| **5.1 Invalid Dates** | **PASS** | | |
| **5.2 Date Sorting** | **PASS** | | |
| **6 Insert Date / Time** | | | |
| **6.1 Document** | **PASS** | | |
| **6.2 Header** | **PASS** | | |
| **6.3 Footer** | **PASS** | | |
| **7 Check File / Document Properties** | | | |
| **7.1 File Properties** | **PASS** | | |
| **7.2 Last Modified Date in File/Open** | **PASS** | | |
| **Time Period Three (Feb 29, 2000)** | | | |
| **3 Find Fast Indexing** | | | |

# B.2.2.2 MS Word '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| | | | |
| **3.1 Create Index** | **PASS** | | Index was successfully created; creation date shown in Update Index / Information = "2/29/2000" |
| **3.2 Log File** | **PASS** | | Date entries in log file after regional settings were changed appear as "1/1/2000" |
| **4 File Search** | | | |
| **4.1 Search by Creation Date** | **PASS** | | |
| **4.2 Search by Last Modified Date** | **PASS** | | |
| **4.3 Search by Custom Date Property** | **PASS** | | |
| **5 Date Window Tests (Table / Sort)** | | | |
| **5.1 Invalid Dates** | **PASS** | | |
| **5.2 Date Sorting** | **PASS** | | |
| **6 Insert Date / Time** | | | |
| **6.1 Document** | **PASS** | | |
| **6.2 Header** | **PASS** | | |
| **6.3 Footer** | **PASS** | | |
| **7 File / Document Properties** | | | |
| **7.1 File Properties** | **PASS** | | |
| **7.2 Last Modified Date in File/Open** | **PASS** | | |

# B.2.3 MS Excel '97

# B.2.3.1 MS Excel '97 Test Plan

# 1 MS Excel '97 Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to insure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing Regional Settings as well as Date Windowing / Sort / Special Dates Entry / @Functions / Calculations using Dates and File Save/Open.

# 2 Regional Settings Test

To ensure that this application will provide valid date and time information during Y2K testing; the operating system clock must be properly formatted to the 4-digit long value.

Test: Go to Start - click Settings - click Control Panel.  Then select Regional Settings.
Next, click Date – change the Short Date Style to the 4-digit date format M/D/YYYY - click Apply and then close Regional Settings.
Reopen MS Excel '97 and click Insert – Field – click Date and Time – click Date – click OK.

Expected Result: The date displayed should be in the 4-digit date format.

# 3 Date Window Tests Using Data / Sort MS Excel Cells

The handling / conversion of 2-digit date year format while in Excel assumes a date window of 1930 – 2029.  Sort can interpret text strings as dates, and sort in chronological, ascending or descending order.

| COLUMN 1 | COLUMN 2 |
|----------|----------|
| 2/20/2000 | 1/2/2035 |
| 3/1/2000 | 1/2/29 |
| 2/30/2000 | 1/2/30 |

*Above has been tested in "Test Sheet – Excel" (see that data for more info)

Test 1:         Is 2/30/2000 (an invalid date) sorted before 3/1/2000?
                Select Data – then Sort – then select Column 1 to be Sorted –then indicate
                select Ascending (lowest year to greatest year)

Expected        Verify that 2/30/2000 is sorted before 3/1/2000. This demonstrates that
Result:         there is no date validation in Table / Sort –because of the assumed date
                window.

Test 2:         2-digit date year format assumes a date window of 1930 – 2029 and 4-
                digit format is not to exceed the year 2035 – Will all data sort in
                descending order correctly?  Note:  With Regional Settings set to
                mm/dd/yyyy, Excel automatically converts 2-digit dates into 4-digit date
                fields.
                Select Data – then Sort – then select Column 2 to be Sorted then select
                Descending (greatest to lowest year).

Expected        1/2/2035 –is 1st, 1/2/29 is 2nd and 1/2/30 is 3rd (all were sorted in correct
Result:         descending order) in accordance with the Date Window Test Rules above.

# 4 Special Dates Entry

There are some dates which when entered in 2 or 4-digit format (specified below) may be
misinterpreted by MS Excel '97.

Test:           Enter the following dates:
                12/31/30
                12/31/29
                2/28/00
                2/29/00
                2/30/00
                3/1/00
                9/9/99
                2/28/1
                2/29/1
                2/28/4
                2/29/4

Expected        Dates should appear as follows:
Result:         12/31/1930
                12/31/2029
                02/28/2000
                02/29/2000
                2/30/00 (Left in text format, as this is an invalid date)
                03/01/2000
                09/09/1999
                02/28/2001

2/29/1 (Left in text format, as this is an invalid date)
02/28/2004
02/29/2004

# 5  Testing of @ FUNCTIONS

## 5.1   @NOW() feature.

The @NOW() feature within Excel produces the current date / time information and presents it in this cell.

Test:                Type "@NOW()"

Expected        Display of current date/time (as specified by the Cell Format).
Result:            *Note:  Display will produce current date/time information as simulated by Year 2000 Test Lab.

## 5.2 @DATE() feature

The @DATE() Feature provides a date based on the following format @DATE(YEAR, MONTH, DAYS).  If the number of months exceeds 12, the year is appropriately incremented.  If the number of days exceeds the total in the month(s), the months (& years) are incremented accordingly.

Test1:              Type "@DATE(00,2,30)"

Expected        Display of 03/01/1900
Result:            *Note:  The DATE() function is not designed to take 2-digit year shortcuts, since it receives numeric parameter.  The DATE() function calculates a number less than 1900 as an offset from 1900.  Use of a 4-digit year resolves this issue.

Test2:              Type "@DATE(2000,2,30)"

Expected        Display of 03/01/2000
Result:

## 5.3   @TODAY() Feature

Returns current date and displays it.

Test:                Type "@TODAY()"

Expected      Proper display of environments Date.
Result:

# 6  Calculations using Dates

Excel allows dates to be used in calculations.

Test1:          Add 60 days to 01/01/2000.

Expected      Display of 03/01/2000.
Result:

Test2:          Subtract 91 days from 03/31/00.

Expected      Display of 12/31/1999.
Result:

Test3:          Compare the number of days difference between 03/01/2000 and
                12/31/1999.

Expected      61 days difference.
Result:

# 7 File Open / Save

File properties are details about a file that help identify it. You can utilize preset,
customized or automatic file properties. Statistics such as file size and the date files are
created and last modified are file properties that are automatically maintained for you.

Test:           Go to Open and select "Last Modified".  Choose "Any Time".

Expected      Confirm all files saved during previous testing session report correct "Last
Result:        Modified" dates.

The File – Open document management feature should be able to display a list of files,
details (for dates) or properties if the button is selected; as well, search by name, type,
text or last modified date.

Test:           Create a file called: Test of_ Date/Time
                Change the date and time of the Test of_ Date/Time document file.

Expected      The File – Save document management feature should bring up the proper
Result:        "OK to Replace?" confirmation dialog when attempting to Save a file after
                the date/time has been changed.

Test:           Confirm that File – Open is able to display correct last modified date.

Expected          Verify above result by clicking File menu click Versions - Excel displays
Result:           the date and time each version was saved, the name of the person who
                  saved each version, and truncated lines of comments. The most recent
                  version appears at the top of the list.

# B.2.3.2 MS Excel '97 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| | | | |
| **Product Tested /** **Category** | | **Hardware/Software Configuration** | |
| | | | |
| MicroSoft Excel '97 / **Desktop Applications** | | **Compaq 4000 /** **Windows NT Workstation 4.0** | |
| | | | |
| **Date** | | **Tester (s)** | |
| **January 19 - 20, 1999 /** **11:15am - 11:45am** | | **Phil Knopp** | |
| | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| | | | |
| **Time Period 1 (12/31/1999):** | | | |
| | | | |
| **3 Date Window Tests using Data/Sort MS Excel cells** | **PASS** | | |
| | | | |
| **3.1 Test Sort using (2/30/00) invalid date** | **PASS** | | "2/30/00" was recognized as an invalid date. Rather than treating the date as an error it instead interpreted it as a text entry and sorted accordingly. |
| | | | |
| **3.2 Test Sort using 2-digit date window** | **PASS** | | All dates were accepted and sorted accordingly. |
| | | | |
| **4 Special Dates Entry** | **PASS** | | All valid dates were accepted and converted successfully into four digit dates using the Century Window of 1930 to 2029. Invalid dates were treated as text entries. |
| | | | |
| **5 Testing of @Functions** | **PASS** | | |
| | | | |
| **5.1 @NOW() Feature** | **PASS** | | @Now() returned the correct date and time based on the current test lab settings. |
| | | | |
| **5.2 @DATE() Feature** | **PASS** | | @Date() returned the correct date calculated by the given input. Note: Calculated functions such as this do not assume any Century Window and base all years as occuring in the 20th Century. |
| | | | |
| **5.3 @TODAY() Feature** | **PASS** | | @Today() returned the correct date based on the current test lab settings. |
| | | | |
| **6 Calculations using Dates** | **PASS** | | |

# B.2.3.2 MS Excel '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| | | | |
| | | | |
| **6.1 Adding to a date** | | | Adding any number to a date increments the given date by that number of days.  This test worked correctly. |
| | **PASS** | | |
| **6.2 Subtract from a date** | | | |
| | | | Subtracting any number from a date decrements the given date by that number of days.  This test worked correctly. |
| | **PASS** | | |
| **6.3 Comparing the difference (in days) between dates.** | | | This test worked correctly. It may be noted that the result should be formatted as a number or it will appear as a date (starting with January 0, 1900 and adding or subtracting the appropriate number of days from this date). |
| | **PASS** | | |
| | | | |
| **7 File Open/Save** | | | All time date stamps worked properly. |
| | **PASS** | | |
| | | | |
| **Time Period 2 (01/01/2000):** | | | |
| | | | |
| **3 Date window tests using Data/Sort MS Excel cells** | | | All tests passed successfully as expected. |
| | **PASS** | | |
| | | | |
| **3.1 Test Sort using (2/30/00) invalid date** | | | "2/30/00" was recognized as an invalid date.  Rather than treating the date as an error it instead interpreted it as a text entry and sorted accordingly. |
| | **PASS** | | |
| | | | |
| **3.2 Test Sort using 2-digit date window** | | | All dates were accepted and sorted accordingly. |
| | **PASS** | | |
| | | | |
| **4. Special Dates Entry** | | | All valid dates were accepted and converted successfully into a four digit date, using the Century Window of 1930 to 2029.  Invalid dates were treated as text entries. |
| | **PASS** | | |
| | | | |
| **5 Testing of @Functions** | **PASS** | | |
| | | | |
| **5.1 @NOW() feature** | | |  @Now() returned the correct date and time based on the current test lab settings. |
| | **PASS** | | |
| | | | |

# B.2.3.2 MS Excel '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| 5.2 @DATE() feature | **PASS** | | @Date() returned the correct date calculated by the given input. Note: Calculated functions such as this do not assume any Century Window and base all years as occurring in the 20th Century. |
| 5.3 @TODAY() feature | **PASS** | | @Today() returned the correct date based on the current test lab settings. |
| 6 Calculations using Dates | **PASS** | | |
| 6.1 Adding with a date | **PASS** | | Adding any number to a date increments the given date by that number of days. This test worked correctly. |
| 6.2 Subtract with date | **PASS** | | Subtracting any number from a date decrements the given date by that number of days. This test worked correctly. |
| 6.3 Comparing difference (in days) between dates | **PASS** | | This test worked correctly. It may be noted that the result should be formatted as a number or it will appear as a date (starting with January 0, 1900 and adding or subtracting the appropriate number of days from this date). |
| 7 File Open/Save | **PASS** | | All time date stamps worked properly. |
| Time Period 3 (02/29/2000): | | | |
| 3 Date window tests using Data/Sort MS Excel cells | **PASS** | | All tests passed successfully as expected. |
| 3.1 Test Sort using (2/30/00) invalid date | **PASS** | | "2/30/00" was recognized as an invalid date. Rather than treating the date as an error it instead interpreted it as a text entry and sorted accordingly. |
| 3.2 Test Sort using 2-digit date window | **PASS** | | All dates were accepted and sorted accordingly. |

# B.2.3.2 MS Excel '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **4 Special Dates Entry** | **PASS** | | All valid dates were accepted and converted successfully into a four digit date, using the Century Window of 1930 to 2029. Invalid dates were treated as text entries. |
| **5 Testing of @Functions** | **PASS** | | |
| **5.1 @NOW() feature** | **PASS** | | @Now() returned the correct date and time based on the current test lab settings. |
| **5.2 @DATE() feature** | **PASS** | | @Date() returned the correct date calculated by the given input. Note: Calculated functions such as this do not assume any Century Window and base all years as occurring in the 20th Century. |
| **5.3 @TODAY() feature** | **PASS** | | @Today() returned the correct date based on the current test lab settings. |
| **6 Calculations using Dates** | **PASS** | | |
| **6.1 Adding with a date** | **PASS** | | Adding any number to a date increments the given date by that number of days. This test worked correctly. |
| **6.2 Subtract with date** | **PASS** | | Subtracting any number from a date decrements the given date by that number of days. This test worked correctly. |
| **6.3 Comparing different (in days) between dates.** | **PASS** | | This test worked correctly. It may be noted that the result should be formatted as a number or it will appear as a date (starting with January 0, 1900 and adding or subtracting the appropriate number of days from this date). |
| **7 File Open/Save** | **PASS** | | All time date stamps worked properly. |

# B.2.4 MS Internet Explorer v4.0

# B.2.4.1 MS Internet Explorer v4.0 Test Plan

# 1 Internet Explorer Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to ensure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing Regional Settings as well as Date Windowing / Connection to Web Sites / and File Save/Open.

# 2 Regional Settings Test

To ensure that this application will provide valid date and time information during Y2K testing; the operating system clock must be properly formatted to the 4-digit long value.

Test:          Go to Start - click Settings - click Control Panel.  Then select Regional
               Settings.
               Next, click Date – change the Short Date Style to the 4-digit date format
               m/d/yyyy -
               click Apply and then close Regional Settings.
               Reopen MS Internet Explorer 97 and click Insert – Field – click Date and
               Time –click Date –
               click OK.

Expected      The date displayed should be in the 4-digit date format.
Result:

# 3 Connect to Web Sites

Test1:         Upon entering Internet Explorer, does Home Page automatically display?

Expected
Result:        Home Page displays upon opening of Internet Explorer.

Test2:         Enter a new URL to see if connection works correctly.

Expected
Result:        New web site is displayed.

# 4 File Open / Save

File properties are details about a file that help identify it. You can utilize preset, customized or automatic file properties. Statistics such as file size, create date, and last modified date are file properties that are automatically maintained for you.

Test:    Go to Open and view by "Last Modified" date.

Expected  Confirm all files saved during previous testing session report correct "Last Modified" dates.

The File – Open document management feature should be able to display a list of files, details (for dates) or properties if the button is selected; as well, search by name, type, text or last modified date.

Test:    Create a file called: Test of_ Date/Time
      Change the date and time of the Test of_ Date/Time document file.

Expected  The File – Save document management feature should bring up the proper
Result:   "OK to Replace?" confirmation dialog when attempting to Save a file after the date/time has been changed.

Test:    Confirm that File – Open is able to display correct last modified date.

Expected  Verify above result by clicking File menu click Versions – Internet
Result:   Explorer displays the date and time each version was saved, the name of the person who saved each version, and truncated lines of comments. The most recent version appears at the top of the list.

Note:  That various downloads, secure connections, and electronic commerce issues have not been dealt with as the Y2K Test Lab is an independent environment not connected to these services.

# B.2.4.2 MS Internet Explorer v4.0 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | |
| MS Internet Explorer v4.0 / Desktop Applications | | Compaq 4000; WinNT Operating System | |
| | | | |
| **Date / Time** | | **Tester (s)** | |
| January 19 - 20, 2000 / 11:35am - 12:00pm | | Phil Knopp | |
| | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| | | | |
| **Time Period 1 (12/31/1999):** | | | |
| | | | |
| **3  Connection to web sites** | PASS | | Connected to intranet site located within CR Y2K test lab.  Due to requirements of lab to be isolated, testing of various internet sites and resources was not within the scope of this effort. |
| **3.1 Conection to Home Page** | PASS | | Connected to 146.138.83.8.  This was an intranet site located within our Y2K test lab. |
| **3.2 Connection to another web site** | PASS | | Connected to "sample" site accessible through the primary connection. |
| **4 File Open/Save** | PASS | | File time/date stamps worked successfully. |
| | | | |
| **Time Period 2 (01/01/2000):** | | | |
| | | | |
| **3  Connection to web sites** | PASS | | Connected to intranet site located within CR Y2K test lab.  Due to requirements of lab to be isolated, testing of various internet sites and resources was not within the scope of this effort. |
| **3.1 Conection to Home Page** | PASS | | Connected to 146.138.83.8.  This was an intranet site located within our Y2K test lab. |

# B.2.4.2 MS Internet Explorer v4.0 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|-----------|---------|--------|-----------------|
| | | | |
| **3.2 Connection to another web site** | **PASS** | | Connected to "sample" site accessible through the primary connection. |
| | | | |
| **4 File Open/Save** | **PASS** | | File time/date stamps worked successfully. |
| | | | |
| **Time Period 3 (02/29/2000):** | | | |
| | | | |
| **3 Connection to web sites** | **PASS** | | Connected to intranet site located within CR Y2K test lab.  Due to requirements of lab to be isolated, testing of various internet sites and resources was not within the scope of this effort. |
| | | | |
| **3.1 Conection to Home Page** | **PASS** | | Connected to 146.138.83.8.  This was an intranet site located within our Y2K test lab. |
| | | | |
| **3.2 Connection to another web site** | **PASS** | | Connected to "sample" site accessible through the primary connection. |
| | | | |
| **4 File Open/Save** | **PASS** | | File time/date stamps worked successfully. |

# B.2.5  Corel WordPerfect Suite 8

## B.2.5.1 Corel WordPerfect Suite 8 Test Plan

## 1 Corel WordPerfect Suite Eight Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to ensure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing Regional Settings once, and within each time period to be tested: testing the QuickFinder feature, Insert Date Field feature, Date Windowing, and File Properties. The time periods to be tested include:

> Dec. 31, 1999,
> Jan. 1, 2000,
> Feb. 29, 2000.

## 2 Regional Settings Test

To ensure that this application will provide properly formatted date and time information; the Short Date Style must be set to display the 4-digit year.

Test:  Go to Start / Settings / Control Panel / Regional Settings / Date. Change the Short Date Style to the 4-digit date format M/D/YYYY; click Apply; then close Regional Settings. Reopen Corel 8 and click Insert / Date and Time; click Insert; click OK.

Expected Result:  The date displayed should be in the 4-digit date format.

## 3 QuickFinder Manager

QuickFinder builds indexes to speed the search for documents from the File / Open dialog box. QuickFinder is located in the Windows Control Panel.

## 3.1 Create QuickFinder Index

Test:  Go to Start / Settings / Control Panel / QuickFinder Manager. (If there is already an index for the C: drive, delete it.) Create a QuickFinder Index by clicking Create, and enter "C:" for folder to search, and hit OK. Then, return to Index / Update Index / Information

Expected    The creation date shown is in the m/d/yyyy format.
Result:

## 3.2 View QuickFinder Log File

Test:    Go to Start / Settings / Control Panel / QuickFinder Manager/ File / View
         Log File

Expected    Date entries in log file should be in m/d/yyyy format.
Result:

## 4 File Search by Last Modified Date

In the File / Open dialog box, files can be selected using Last Modified Date as the
criterion. The tests available are Last Modified Date is:
         Today,
         This week,
         This month,
         This year,
         Yesterday,
         Last week,
         Last month,
         Last year, or
         Anytime.

Test:    Open Corel 8; create / save / close a file.
         Click File / Open; perform a search for the newly created file by selecting
         Today in the Last Modified Field.

Expected    Verify that the document created "today" was found.
Result:

## 5 Date Window Tests

Date windowing has to do with how the software interprets 2-digit years in dates. In
general, a word processing application enters and stores dates as text, and it is not
necessary for the application to interpret or compare dates.

In the Document Summary, dates can be entered either by choosing a date from a
calendar, or entering the date directly into the field. If dates are entered with 2-digit years,
the application will make an assumption concerning the century into which the date will
fall.

NOTE: Some word processing applications enable sorting by date in tables (as opposed to simply sorting by the text content of table cells). Corel 8 does not. Corel 8 will only sort by text

# 5.1 Invalid Dates

Test:        If 2/29/1999 (an invalid date) is entered, what is the result?
             Click on File / Properties; choose the Summary tab; enter 2/29/1999 into
             the Creation Date field.
             What is the result?

# 5.2 Translation of 2-digit Dates

Test:        Enter into the Creation Date field a variety of dates, including 01/01/00,
             01/01/99, 01/01/01, 01/01/69, 01/01/70, to determine what date
             windowing assumptions are used by Corel Suite 8.

# 6 Insert Date / Time

In document headers and footers, and in the body of a document, Insert / Date & Time will insert the current date in various formats.

# 6.1 Insert Date / Time in Document Body

Test:        Select Insert / Date & Time, and insert each of the options in the body of
             the document.

# 6.2 Insert Date / Time in Header

Test:        Select Insert / Date & Time, and insert various options in the header of the
             document.

# 6.3 Insert Date / Time in Footer

Test:        Select Insert / Date & Time, and insert various options in the footer of the
             document.

# 7 File / Document Properties

File properties are details about a file that help identify it, including Created Date, Modified Date, Accessed Date and Printed Date, and customized dates

Test:        Check dates in File Properties by: File / Properties / Statistics to see
             Created Date, Modified Date, Accessed Date and Printed Date.

Expected     Correct dates, with 4-digit years should appear, such as Friday, January
22, 1999.

# B.2.5.2 Corel WordPerfect Suite 8 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | |
| Corel Suite 8 WordPerfect / Desktop Applications | | Compaq Deskpro EN / Windows 95 (4.00.950 B) | |
| **Date** | | **Tester (s)** | |
| **January 19, 1999; 1:00 pm** | | **Kent Klemm** | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| **Regional Settings Test** | **PASS** | | Short Date Style in Regional Settings was changed to m/d/yyyy; "Insert / Field / Date and Time" in Word generated "12/31/1999" as expected |
| **Time Period One (Dec. 31, 1999)** | | | |
| **3 QuickFinder Manager** | | | |
| **3.1 Create Index** | **PASS** | | |
| **3.2 Log File** | **PASS** | | Index was successfully created; creation date shown = "12/31/1999" Date entries in log file appear as "12/31/1999" |
| **4 File Search by Last Modified Date** | **PASS** | | File / Open / Last Modified Date set to Today; File created today (12/31/1999) was found. |
| **5 Date Window Tests)** | | | |
| **5.1 Invalid Dates** | **PASS** | | When 2/29/1999 was entered, the value was not accepted and the field contained the current date. |
| **5.2 Translation of 2-digit Dates** | **PASS** | | When 01/01/00, 01/01/99, 01/01/01/, 01/01/69, 01/01/70 were entered, they all resulted in dates in the 20th century (ie; 1900, 1999, 1901, 1969, and 1970). |
| **6 Insert Date / Time** | | | (See Corel8 document created 12/31/99) |
| **6.1 Document** | **PASS** | | |
| **6.2 Header** | **PASS** | | |
| **6.3 Footer** | **PASS** | | |

# B.2.5.2 Corel WordPerfect Suite 8 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **7 File Properties** | **PASS** | | In File Properties, Created / Modified / Accessed Dates all contained "Friday, December 31, 1999" |
| **Time Period Two (Jan. 1, 2000)** | | | |
| **3 QuickFinder Manager** | | | |
| **3.1 Create Index** | | | Index was successfully created; creation date shown = "1/1/2000" |
| **3.2 Log File** | | | Date entries in log file appear as "1/1/2000" |
| **4 File Search by Last Modified Date** | **PASS** | | File / Open / Last Modified Date set to Today; File created today (1/1/2000) was found. |
| **5 Date Window Tests** | | | |
| **5.1 Invalid Dates** | **PASS** | | When 2/29/1999 was entered, the value was not accepted and the field contained the current date. |
| **5.2 Translation of 2-digit Dates** | **PASS** | | When 01/01/00, 01/01/99, 01/01/01/, 01/01/69, 01/01/70 were entered, they all resulted in dates in the 21st century (ie; 2000, 2099, 2001, 2069, and 2070). |
| **6 Insert Date / Time** | | | (See Corel8 document created 1/1/2000) |
| **6.1 Document** | **PASS** | | |
| **6.2 Header** | **PASS** | | |
| **6.3 Footer** | **PASS** | | |
| **7 File Properties** | **PASS** | | In File Properties, Created / Modified / Accessed Dates all contained "Saturday, January 1, 2000" |
| **Time Period Three (Feb 29, 2000)** | | | |
| **3 QuickFinder Manager** | | | |
| **3.1 Create Index** | **PASS** | | Index was successfully created; creation date shown = "2/29/2000" |
| **3.2 Log File** | **PASS** | | Date entries in log file appear as "2/29/2000" |
| **4 File Search by Last Modified Date** | **PASS** | | File / Open / Last Modified Date set to Today; File created today (2/29/2000) was found. |

# B.2.5.2 Corel WordPerfect Suite 8 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| | | | |
| **5 Date Window Tests** | | | |
| | | | |
| **5.1 Invalid Dates** | **PASS** | | When 2/29/1999 was entered, the value was not accepted and the field contained the current date. |
| | | | |
| **5.2 Translation of 2-digit Dates** | **PASS** | | |
| | | | When 01/01/00, 01/01/99, 01/01/01/, 01/01/69, 01/01/70 were entered, they all resulted in dates in the 21st century (ie; 2000, 2099, 2001, 2069, and 2070). |
| **6 Insert Date / Time** | | | (See Corel8 document created 2/29/2000) |
| **6.1 Document** | **PASS** | | |
| | | | |
| **6.2 Header** | **PASS** | | |
| | | | |
| **6.3 Footer** | **PASS** | | |
| | | | |
| **7 File Properties** | **PASS** | | In File Properties, Created / Modified / Accessed Dates all contained "Tuesday, February 29, 2000" |

# B.2.6     WordPerfect v6.1

## B.2.6.1 WordPerfect v6.1 Test Plan

## 1 WordPerfect 6.1 Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to ensure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing Regional Settings once, and within each time period to be tested: testing the QuickIndexer feature, Insert Date Field feature, Date Windowing, and File Properties. The time periods to be tested include:

    Dec. 31, 1999,
    Jan. 1, 2000,
    Feb. 29, 2000.

## 2 Regional Settings Test

To ensure that this application will provide properly formatted date and time information; the Short Date Style must be set to display the 4-digit year.

Test:         Go to Start / Settings / Control Panel / Regional Settings / Date.
              Change the Short Date Style to the 4-digit date format M/D/YYYY; click
              Apply; then close Regional Settings.
              Reopen WordPerfect and click Insert / Date / Date Text; click OK.

Expected      The date displayed should be in the 4-digit date format.
Result:

## 3. Create QuickIndexer Index

QuickIndexer builds indexes to speed the search for documents from the File / Open dialog box. QuickIndexer is executed from the File / Open dialog box.

Test:         Go to File / Open / QuickFinder / Indexer.
              Create a QuickFinder Index by clicking Create, enter "C:" for folder to
              search, enter directory structure to be indexed, and hit OK. Click Add,
              Click Generate.

Expected      The creation date shown is in the m/d/yyyy format.
Result:

# 4 File Search by Last Modified Date

In the File / Open dialog box, files can be searched for using Last Modified Date as the criterion. The date to be searched for can be entered via a calendar.

Test:
Open WordPerfect 6.1; create / save / close a file.
Click File / Open / QuickFinder. Specify the search criteria by entering *.wpd at Search For; enter the name of the index in QuickFinder Index; enter the date (current date) to be searched for in File Date Range; click on Find.

Expected Result:
Verify that the document created "today" was found.

# 5 Date Window Tests

Date windowing has to do with how the software interprets 2-digit years in dates. In general, a word processing application enters and stores dates as text, and it is not necessary for the application to interpret or compare dates.

In the Document Summary, dates can be entered either by choosing a date from a calendar, or entering the date directly into the field. If dates are entered with 2-digit years, the application will make an assumption concerning the century into which the date will fall.

NOTE: Some word processing applications enable sorting by date in tables (as opposed to simply sorting by the text content of table cells). WordPerfect 6.1 does not. WordPerfect 6.1 will only sort by text

## 5.1 Invalid Dates

Test:
If 2/29/1999 (an invalid date) is entered, what is the result?
Click on File / Document Summary; enter 2/29/1999 into the Creation Date field.
What is the result?

## 5.2 Translation of 2-digit Dates

Test:
Enter into the Creation Date field a variety of dates, including 01/01/00, 01/01/99, 01/01/01, 01/01/69, 01/01/70, to determine what date windowing assumptions are used by WordPerfect 6.1.

# 6 Insert Date / Time

In document headers and footers, and in the body of a document, Insert / Date will insert the current date.

## 6.1 Insert Date / Time in Document Body

Test:    Select Insert / Date / Date Text, and insert each the date in the body of the document.

## 6.2 Insert Date / Time in Header

Test:    Select Insert / Date / Date Text, and insert the date in the header of the document.

## 6.3 Insert Date / Time in Footer

Test:    Select Insert / Date / Date Text, and insert the date in the footer of the document.

# 7 File / Document Properties

File properties are details about a file that help identify it, including Created Date, Modified Date, Accessed Date and Printed Date, and customized dates

Test:    Check dates in Windows Explorer by right-clicking on the document / selecting Properties to see Created Date, Modified Date, Accessed Date and Printed Date.

Expected    Correct dates, with 4-digit years should appear, such as Friday, January
Result:    22, 1999.

# B.2.6.2 WordPerfect v6.1 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | |
| **WordPerfect 6.1 / Desktop Applications** | | **Compaq Deskpro EN / Windows 95 (4.00.950 B)** | |
| | | | |
| **Date** | | **Tester (s)** | |
| **January 19, 1999; 1:00 pm** | | **Kent Klemm** | |
| | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| **Regional Settings Test** | **PASS** | | Short Date Style in Regional Settings was changed to m/d/yyyy; "Insert / Field / Date and Time" in Word generated "12/31/1999" as expected |
| **Time Period One (Dec. 31, 1999)** | | | |
| **3 Create QuickFinder Index** | **PASS** | | |
| | | | Index was successfully created; creation date shown = "12/31/1999" |
| **4 File Search by Last Modified Date** | **FAIL** | **Minor** | Search returned "No files found" |
| **5 Date Window Tests)** | | | |
| **5.1 Invalid Dates** | **PASS** | | When 2/29/1999 was entered, the value was not accepted and the field contained the current date. |
| **5.2 Translation of 2-digit Dates** | **PASS** | | When 01/01/00, 01/01/99, 01/01/01/, 01/01/69, 01/01/70 were entered, they all resulted in dates in the 20th century (ie; 1900, 1999, 1901, 1969, and 1970). |
| **6 Insert Date / Time** | | | |
| **6.1 Document** | **PASS** | | |
| **6.2 Header** | **PASS** | | |
| **6.3 Footer** | **PASS** | | |
| **7 File Properties** | **PASS** | | In File Properties, Created / Modified / Accessed Dates all contained "Friday, December 31, 1999" |

# B.2.6.2 WordPerfect v6.1 Check-Off Sheet

| Test Name | Results | Effect | Result Comments | |
|---|---|---|---|---|
| **Time Period Two (Jan. 1, 2000)** | | | | |
| **3 Create QuickFinder Index** | | | Index was successfully created; creation date shown = "1/1/2000" | |
| **4 File Search by Last Modified Date** | **PASS** | | Search returned "No files found" | |
| **5 Date Window Tests** | | | | |
| **5.1 Invalid Dates** | **PASS** | | When 2/29/1999 was entered, the value was not accepted and the field contained the current date. | |
| **5.2 Translation of 2-digit Dates** | **PASS** | | | |
| | | | When 01/01/00, 01/01/99, 01/01/01/, 01/01/69, 01/01/70 were entered, they all resulted in dates in the 20th century (ie; 1900, 1999, 1901, 1969, and 1970). | |
| **6 Insert Date / Time** | | | | |
| **6.1 Document** | **PASS** | | | |
| **6.2 Header** | **PASS** | | | |
| **6.3 Footer** | **PASS** | | | |
| **7 File Properties** | **PASS** | | In File Properties, Created / Modified / Accessed Dates all contained "Saturday, January 1, 2000" | |
| **Time Period Three (Feb 29, 2000)** | | | | |
| **3 Create QuickFinder Index** | **PASS** | | | |
| | | | Index was successfully created; creation date shown = "2/29/2000" | |
| **4 File Search by Last Modified Date** | **FAIL** | **MINOR** | Search returned "No files found" | |
| **5 Date Window Tests** | | | | |
| **5.1 Invalid Dates** | **PASS** | | When 2/29/1999 was entered, the value was not accepted and the field contained the current date. | |
| **5.2 Translation of 2-digit Dates** | **PASS** | | | |
| | | | When 01/01/00, 01/01/99, 01/01/01/, 01/01/69, 01/01/70 were entered, they all resulted in dates in the 20th century (ie; 1900, 1999, 1901, 1969, and 1970). | |

# B.2.6.2 WordPerfect v6.1 Check-Off Sheet

| Test Name | Results | Effect | Result Comments | |
|---|---|---|---|---|
| **6 Insert Date / Time** | | | | |
| **6.1 Document** | **PASS** | | | |
| **6.2 Header** | **PASS** | | | |
| **6.3 Footer** | **PASS** | | | |
| **7 File Properties** | **PASS** | | In File Properties, Created / Modified / Accessed Dates all contained "Tuesday, February 29, 2000" | |

## B.2.7     Lotus 1-2-3 '97

## B.2.7.1 Lotus 1-2-3 '97 Test Plan

## 1 Lotus 123 Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to insure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing <u>Regional Settings</u> as well as <u>Date Windowing</u> / <u>Sort</u> / <u>Special Dates Entry</u> / <u>@Functions</u> / <u>Calculations using Dates</u>  and <u>File Save/Open</u>.

## 2 Regional Settings Test

To ensure that this application will provide valid date and time information during Y2K testing; the operating system clock must be properly formatted to the 4-digit long value.

Test:          Go to Start - click Settings - click Control Panel.  Then select Regional
Settings.
               Next, click Date – change the Short Date Style to the 4-digit date format M/D/YYYY -
               click Apply and then close Regional Settings.
               Reopen MS Lotus 123 97 and click Insert – Field – click Date and Time –
               click Date –
               click OK.

Expected       The date displayed should be in the 4-digit date format.
Result:

## 3 Date Window Tests Using Range/Sort Cells

The handling/conversion of 2-digit date year format while in Lotus 123 assumes a date window of 1948 – 2049.  Sort can interpret text strings as dates, and sort in chronological, ascending or descending order.

| COLUMN 1 | COLUMN 2 |
|----------|----------|
| 2/20/2000 | 1/2/2035 |
| 3/1/2000 | 1/2/49 |
| 2/30/2000 | 1/2/50 |

*Above has been tested in "Test Sheet – Lotus 123" (see that data for more info)

Test 1:     Is 2/30/2000 (an invalid date) sorted before 3/1/2000?
            Select <u>Data</u> – then <u>Sort</u> – then select <u>Column 1</u> to be Sorted –then indicate
            select <u>Ascending</u> (lowest year to greatest year)

Expected    Verify that 2/30/2000 is sorted before 3/1/2000. This demonstrates that
            there is no date
Result:     validation in Table/Sort –because of the assumed date window.

Test 2:     2-digit date year format assumes a date window of 1950 – 2049.  Will all
            data sort in descending order correctly?
            Select <u>Range</u> – then <u>Sort</u> – then select <u>Column 2</u> to be Sorted then select
            Descending (greatest to lowest year).

Expected    1/2/2049 –is 1$^{st}$, 1/2/2035 is 2$^{nd}$ and 1/2/1950 is 3$^{rd}$ (all were sorted in
            correct descending
Result:     order) in accordance with the Date Window Test Rules above.

# 4. Special Dates Entry

There are some dates which when entered in 2 or 4-digit format (specified below) may be
misinterpreted by Lotus 123 97'.

Test:       <u>Enter the following dates:</u>
            12/31/49
            12/31/50
            2/28/00
            2/29/00
            2/30/00
            3/1/00
            9/9/99
            2/28/1
            2/29/1
            2/28/4
            2/29/4

Expected
Result:     <u>Dates should appear as follows:</u>
            12/31/2049
            12/31/1950
            02/28/2000
            02/29/2000
            Registers as an error  (This is an invalid date)
            03/01/2000
            09/09/1999
            02/28/2001
            Registers as an error  (This is an invalid date)

02/28/2004
02/29/2004

# 5 Testing of @ FUNCTIONS

## 5.1 @NOW feature.

The @NOW feature within Lotus 123 produces the current date/time information and presents it in this cell.

Test:          Type "@NOW"

Expected
Result:          Display of current date/time (as specified by the Cell Format).
                 *Note:  Display will produce current date/time information as simulated
                 by Year 2000 Test Lab.

## 5.2 @DATE() feature.

The @DATE() Feature provides a date based on the following format @DATE(YEAR, MONTH, DAYS).  If the number of months exceeds 12 the year is appropriately incremented.  If the number of days exceeds the total in the month(s), the months (& years) are incremented accordingly.

Test1:          Type "@DATE(00,2,29)"

Expected
Result:          Display of 02/29/1900

*Note:  The DATE() function is not designed to take 2-digit year shortcuts, since it receives numeric parameter.  The DATE() function calculates a number less than 1900 as an offset from 1900.  Use of a 4-digit year resolves this issue.

Test2:          Type "@DATE(2000,2,29)"

Expected
Result:          Display of 02/29/2000

## 5.3  @TODAY Feature

Returns current date and displays it.

Test:          Type "@TODAY"

Expected
Result:          Proper display of environments Date.

# 6  Calculations using Dates

Lotus 123 allows dates to be used in calculations.

Test1:          Add 60 days to 01/01/2000.

Expected
Result:          Display of 03/01/2000.

Test2:          Subtract 91 days from 03/31/00.

Expected
Result:          Display of 12/31/1999.

Test3:          Compare difference between dates of 03/01/2000 and 12/31/1990.

Expected
Result:          61 days difference.

# 7 File Open / Save

File properties are details about a file that help identify it. You can utilize preset, customized or automatic file properties. Statistics such as file size and the date files are created and last modified are file properties that are automatically maintained for you.

Test:           Go to Open and view by "Last Modified" date.

Expected        Confirm all files saved during previous testing session report correct "Last Modified" dates.

The File – Open document management feature should be able to display a list of files, details (for dates) or properties if the button is selected; as well, search by name, type, text or last modified date.

Test:           Create a file called: Test of_ Date/Time
                Change the date and time of the Test of_ Date/Time document file.

Expected        The File – Save document management feature should bring up the proper "OK to
Result:         Replace?" confirmation dialog when attempting to Save a file after the date/time has been changed.

Test:           Confirm that File – Open is able to display correct last modified date.

Expected         Verify above result by clicking File menu click Versions – Lotus 123
Result:          displays the date and time each version was saved, the name of the person
                 who saved each version, and truncated lines of comments. The most recent
                 version appears at the top of the list.

# B.2.7.2 Lotus 1-2-3 '97 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |

| Product Tested / Category | | Hardware/Software Configuration | |
|---|---|---|---|
| Lotus 123 / Desktop Applications | | Compaq 4000 / Windows NT Workstation v4.0 | |

| Date | Time | Tester (s) | |
|---|---|---|---|
| January 19 - 20, 1999 / 11:00 - 11:30am | | Phil Knopp | |

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| **Time Period One (Dec. 31, 1999)** | | | |
| **3 Date window tests using Data/Sort Lotus 123 cells** | **PASS** | | All tests passed successfully as expected. |
| **3.1 Test Sort using (2/30/00) invalid date** | **PASS** | | Lotus 123 recognized that "2/30/00" was not a valid date, and treats the data as an error. |
| **3.2 Test Sort using 2-digit date window** | **PASS** | | All dates were accepted and sorted accordingly. |
| **4 Special Dates Entry** | **PASS** | | All valid dates were accepted and converted successfully into a four digit date, using the Century Window of 1950 to 2048. Invalid dates were treated as text entries. |
| **5 Testing of @Functions** | **PASS** | | |
| **5.1 @NOW feature** | **PASS** | | @Now returned the correct date and time based on the current test lab settings. |
| **5.2 @DATE() feature** | **PASS** | | @Date() returned the correct date calculated by the given input. Note: Calculated functions such as this do not assume any Century Window and base all years as occuring in the 20th Century. |
| **5.3 @TODAY feature** | **PASS** | | @Today() returned the correct date based on the current test lab settings. |

# B.2.7.2 Lotus 1-2-3 '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| | | | |
| | | | |
| **6 Calculations using Dates** | **PASS** | | |
| | | | |
| **6.1 Adding with a date** | **PASS** | | Adding any number to a date increments the given date by that number of days. This test worked correctly. |
| | | | |
| **6.2 Subtract with date** | **PASS** | | Subtracting any number from a date decrements the given date by that number of days. This test worked correctly. |
| | | | |
| **6.3 Comparing different (in days) between dates.** | **PASS** | | This test worked correctly. It may be noted that the result should be formated as a number or it will appear as a date (starting with January 0, 1900 and adding or subtracting the appropriate number of days from this date). |
| | | | |
| **7 File Open/Save** | **PASS** | | All time date stamps worked properly. |
| | | | |
| **Time Period Two (Jan. 1, 2000)** | | | |
| | | | |
| **3 Date window tests using Data/Sort Lotus 123 cells** | **PASS** | | All tests passed successfully as expected. |
| | | | |
| **3.1 Test Sort using (2/30/00) invalid date** | **PASS** | | Lotus 123 recognized that "2/30/00" was not a valid date, and treats the data as an error. |
| | | | |
| **3.2 Test Sort using 2-digit date window** | **PASS** | | All dates were accepted and sorted accordingly. |
| | | | |
| **4 Special Dates Entry** | **PASS** | | All valid dates were accepted and converted successfully into a four digit date, using the Century Window of 1950 to 2048. Invalid dates were treated as text entries. |
| | | | |
| **5 Testing of @Functions** | **PASS** | | |
| | | | |
| **5.1 @NOW feature** | **PASS** | | @Now returned the correct date and time based on the current test lab settings. |
| | | | |

# B.2.7.2 Lotus 1-2-3 '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| | | | |
| **5.2 @DATE() feature** | **PASS** | | @Date() returned the correct date calculated by the given input. Note:  Calculated functions such as this do not assume any Century Window and base all years as occuring in the 20th Century. |
| | | | |
| **5.3 @TODAY feature** | **PASS** | | @Today() returned the correct date based on the current test lab settings. |
| | | | |
| **6 Calculations using Dates** | **PASS** | | |
| | | | |
| **6.1 Adding with a date** | **PASS** | | Adding any number to a date increments the given date by that number of days.  This test worked correctly. |
| | | | |
| **6.2 Subtract with date** | **PASS** | | Subtracting any number from a date decrements the given date by that number of days.  This test worked correctly. |
| | | | |
| **6.3 Comparing different (in days) between dates.** | **PASS** | | This test worked correctly.  It may be noted that the result should be formated as a number or it will appear as a date (starting with January 0, 1900 and adding or subtracting the appropriate number of days from this date). |
| | | | |
| **7 File Open/Save** | **PASS** | | All time date stamps worked properly. |
| | | | |
| **Time Period Three (Feb. 29, 2000)** | | | |
| | | | |
| **3 Date window tests using Data/Sort Lotus 123 cells** | **PASS** | | All tests passed successfully as expected. |
| | | | |
| **3.1 Test Sort using (2/30/00) invalid date** | **PASS** | | Lotus 123 recognized that "2/30/00" was not a valid date, and treats the data as an error. |
| | | | |
| **3.2 Test Sort using 2-digit date window** | **PASS** | | All dates were accepted and sorted accordingly. |
| | | | |

# B.2.7.2 Lotus 1-2-3 '97 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|---|---|---|---|
| | | | |
| **4 Special Dates Entry** | **PASS** | | All valid dates were accepted and converted successfully into a four digit date, using the Century Window of 1950 to 2048. Invalid dates were treated as text entries. |
| | | | |
| **5 Testing of @Functions** | **PASS** | | |
| | | | |
| **5.1 @NOW feature** | **PASS** | | @Now returned the correct date and time based on the current test lab settings. |
| | | | |
| **5.2 @DATE() feature** | **PASS** | | @Date() returned the correct date calculated by the given input. Note: Calculated functions such as this do not assume any Century Window and base all years as occuring in the 20th Century. |
| | | | |
| **5.3 @TODAY feature** | **PASS** | | @Today() returned the correct date based on the current test lab settings. |
| | | | |
| **6 Calculations using Dates** | **PASS** | | |
| | | | |
| **6.1 Adding with a date** | **PASS** | | Adding any number to a date increments the given date by that number of days. This test worked correctly. |
| | | | |
| **6.2 Subtract with date** | **PASS** | | Subtracting any number from a date decrements the given date by that number of days. This test worked correctly. |
| | | | |
| **6.3 Comparing different (in days) between dates.** | **PASS** | | This test worked correctly. It may be noted that the result should be formated as a number or it will appear as a date (starting with January 0, 1900 and adding or subtracting the appropriate number of days from this date). |
| | | | |
| **7 File Open/Save** | **PASS** | | All time date stamps worked properly. |

# B.2.8　Netscape Navigator v4.0

## B.2.8.1 Netscape Navigator v4.0 Test Plan

## 1 Netscape Navigator Test Procedures

The following test procedures provide step by step instructions for performing each test. The results should be recorded step by step as the test is performed to insure accurate records of the test are documented on the "Year 2000 Test Report" form. The tests will include initializing <u>Regional Settings</u> as well as <u>Date Windowing</u> / <u>Connection to Web Sites</u> / <u>and File Save/Open.</u>

## 2 Regional Settings Test

To ensure that this application will provide valid date and time information during Y2K testing; the operating system clock must be properly formatted to the 4-digit long value.

Test:       Go to Start - click Settings - click Control Panel.  Then select Regional Settings.

              Next, click Date – change the Short Date Style to the 4-digit date format M/D/YYYY -
click Apply and then close Regional Settings.
Reopen MS Internet Explorer 97 and click Insert – Field – click Date and Time –click Date –
click OK.

Expected     The date displayed should be in the 4-digit date format.
Result:

## 3 Connect to Web Sites

Test1:      Upon entering Internet Explorer does Home Page automatically display.

Expected
Result:     Home Page displays upon opening of Internet Explorer.

Test2:      Enter a new URL to see if connection works correctly.

Expected
Result:     New web site is displayed.

# 4 File Open / Save

File properties are details about a file that help identify it. You can utilize preset, customized or automatic file properties. Statistics such as file size and the date files are created and last modified are file properties that are automatically maintained for you.

Test:               Go to Open and view by "Last Modified" date.

Expected        Confirm all files saved during previous testing session report correct "Last
Result:            Modified" dates.

The File – Open document management feature should be able to display a list of files, details (for dates) or properties if the button is selected; as well, search by name, type, text or last modified date.

Test:               Create a file called: Test of_ Date/Time
                    Change the date and time of the Test of_ Date/Time document file.

Expected        The File – Save document management feature should bring up the proper
Result:            "OK to Replace?" confirmation dialog when attempting to Save a file after
                    the date/time has been changed.

Test:               Confirm that File – Open is able to display correct last modified date.

Expected        Verify above result by clicking File menu click Versions – Netscape
Result:            Navigator displays the date and time each version was saved, the name of
                    the person who saved each version, and truncated lines of comments. The
                    most recent version appears at the top of the list.

Note that various downloads, secure connections, and electronic commerce issues have not been dealt with as the Y2K Test Lab is an independent environment not connected to these services.

# B.2.8.2 Netscape Navigator v4.0 Check-Off Sheet

| CR LAN / WAN | | | |
|---|---|---|---|
| **Year 2000 Component Test Report Form** | | | |
| | | | |
| **Product Tested / Category** | | **Hardware/Software Configuration** | |
| Netscape Navigator / Desktop Applications | | Compaq 4000; WinNT Operating System | |
| | | | |
| **Date / Time** | | **Tester (s)** | |
| January 19 - 20, 1999 / 11:00 - 11:30am | | Phil Knopp | |
| | | | |
| **Test Name** | **Results** | **Effect** | **Result Comments** |
| | | | |
| **Time Period One (Dec. 31, 1999)** | | | |
| | | | |
| 3  Connection to web sites | **PASS** | | Connected to intranet site located within CR Y2K test lab.  Due to requirements of lab to be isolated, testing of various internet sites and resources was not within the scope of this effort. |
| | | | |
| 3.1 Conection to Home Page | **PASS** | | Connected to 146.138.83.8.  This was an intranet site located within our Y2K test lab. |
| | | | |
| 3.2 Connection to another web site | **PASS** | | Connected to "sample" site accessible through the primary connection. |
| | | | |
| 4 File Open/Save | **PASS** | | File time/date stamps worked successfully. |
| | | | |
| **Time Period Two (Jan. 1, 2000)** | | | |
| | | | |
| 3 Connection to web sites | **PASS** | | Connected to intranet site located within CR Y2K test lab.  Due to requirements of lab to be isolated, testing of various internet sites and resources was not within the scope of this effort. |
| | | | |
| 3.1 Conection to Home Page | **PASS** | | Connected to 146.138.83.8.  This was an intranet site located within our Y2K test lab. |
| | | | |
| 3.2 Connection to another web site | **PASS** | | Connected to "sample" site accessible through the primary connection. |

# B.2.8.2 Netscape Navigator v4.0 Check-Off Sheet

| Test Name | Results | Effect | Result Comments |
|-----------|---------|--------|-----------------|
| | | | |
| **4 File Open/Save** | **PASS** | | File time/date stamps worked successfully. |
| | | | |
| **Time Period Three (Feb. 29, 2000)** | | | |
| | | | |
| **3 Connection to web sites** | **PASS** | | Connected to intranet site located within CR Y2K test lab.  Due to requirements of lab to be isolated, testing of various internet sites and resources was not within the scope of this effort. |
| | | | |
| **3.1 Conection to Home Page** | **PASS** | | Connected to 146.138.83.8.  This was an intranet site located within our Y2K test lab. |
| | | | |
| **3.2 Connection to another web site** | **PASS** | | Connected to "sample" site accessible through the primary connection. |
| | | | |
| **4 File Open/Save** | **PASS** | | File time/date stamps worked successfully. |
| | | | |
| | | | |

# Appendix C - Compliance Data from Vendor Websites

## C.1 Vendor Data - Netware

### Year 2000 Status of Novell Products

The following table, last modified on 14 December, 1998, lists Novell products that are being validated as part of Novell's Project 2000. If you are using other Novell products or Novell products not listed in these tables (see list of discontinued products ), Novell recommends upgrading to a newer product as indicated below or discontinue use before the turn of the century. All Year 2000 Ready Novell products require a Year 2000 Ready hardware platform (ie. BIOS/RTC).

### NetWare Platform

| Product | Status | Y2K Update / Upgrade? |
|---|---|---|
| NetWare 5 | Year 2000 Ready | No update necessary |
| NetWare 4.2 | Year 2000 Ready | No update necessary |
| NetWare 4.11/intraNetWare (including SMP and SFTIII support) | Year 2000 Ready | Optional update |
| NetWare v4.11 (including SMP and SFTIII support) | Year 2000 Ready | Optional update |
| NetWare v4.11 for OS/2 | Year 2000 Ready with update | Update available |
| NetWare v4.10 (not being supported for OS/2, SMP or SFTIII) | Year 2000 Ready with update | Update available |
| SMP for NetWare v4.10 (and prior versions) | Not being tested - Upgrade to NetWare 4.2 SMP, or NetWare 5 . | |
| SFTIII for NetWare v4.10 (and prior versions) | Not being tested - Upgrade to NetWare 4.2 SFTIII . | |
| NetWare 4.10 (and prior versions) for OS/2 | Not being tested - Upgrade to NetWare 4.2 . | |
| NetWare 4.x versions prior to v4.10 | Not being tested - Upgrade to NetWare 4.2, or NetWare 5 | |
| NetWare v3.2 | Year 2000 Ready | |
| NetWare v3.12 | Year 2000 Ready with update - Upgrade to NetWare v3.2, NetWare 4.2, NetWare 5, or apply update. | Update available |

NetWare v3.11 and prior versions                    Not being tested - Upgrade to NetWare v3.2 , NetWare 4.2,
                                                           or NetWare 5  .


**The Optional Update for Netware 4.11 is NetWare Support Pack v6.0**

# C.2 Vendor Data - MS Windows NT Server v4.0 sp4

Microsoft Year 2000 Readiness Disclosure & Resource Center

Windows NT Server 4.0 SP4 (English) - Win NT
 Product Summary
 Product: Windows NT Server   Category: Compliant
 Version: 4.0 SP4             Operating System: Win NT
 Language: English            Release Date: 29 Jul 1996
 Operational Range:           01 Jan 1996 - 31 Dec 2036
 Prerequisites:               See below
 Product Dependencies:        None
 Clock Dependencies:          System Clock
 Last Updated:                22 Jan 1999

 Product Details
 The current Windows NT 4 Service Pack 4 (SP4) combined with the following actions
 addresses known Year 2000 issues. The compliance rating for Windows NT Server 4.0
 above is dependent upon completing the steps below.
 Windows NT4 has had a number of service packs since its release. To reach a compliant
 state with Windows NT 4, service pack 4 must be installed. Additionally, Microsoft intends
 to maintain the compliance of service pack 4 through January 1, 2001, in addition to any
 subsequent service packs.
 <u>**Introduction**</u>
 When users load the Windows NT Server 4.0 operating system on a computer they are
 asked to select from many installation options. In addition, Microsoft has made additional
 Windows NT Server 4.0 features available to licensed users via Service Packs, the
 Windows NT Option Pack and the Windows NT Web site. Because users may have selected
 a variety of options and installed additional features on a given system, all options and
 features must be considered when assessing the system's Year 2000 readiness status.
 Microsoft has determined that Windows NT Server 4.0 (including some installation
 options) and some versions of additional Windows NT Server 4.0 features have known
 Year 2000 issues, requiring updates. In order to fix these known Year 2000 issues, users
 must first determine the set of options and features that they have installed on a given
 system (the "*Target System*") and follow the three-step procedure described below. In
 some cases the Year 2000 issue can be fixed by users applying fixes. In other cases, users
 are instructed to update a feature to a newer version of the feature to fix known issues.
 The steps identified below take a comprehensive approach to correcting known issues.
 - Step 1 prepares the target system for SP4 by addressing any updates that are
   needed before SP4 is applied.
 - Step 2 installs SP4 to analyze the target system, remove versions which have
   known issues, and install versions that have no known issues.
 - Step 3 then audits the target system. To confirm all known issues have been
   corrected and steps 1 and 2 have been done correctly, the results of the audit
   should indicate that only those versions having a "compliant" rating (as identified
   on the tables below) remain on the target system after Steps 1 and 2 have been
   completed.
 <u>**Important Preliminary Notes:**</u>
 - Users that have both Microsoft Message Queue Service Version 1.0 and Site Server
   Express Version 2.0 installed on their Windows NT Server 4.0 machines should

review the following Microsoft Knowledge Base article before proceeding:
http://support.microsoft.com/support/kb/articles/q197/5/33.asp
- The fix to the Microsoft Virtual Machine described in Table 1 can be applied either before or after applying SP4 to the target system.

**Step 1**

Microsoft has created Service Pack 4 (SP4) to help users address the majority of Year 2000 compliance issues with their Windows NT Server installations in a simple and automated fashion.

In most cases, applying SP4 will correct known Year 2000 issues. In some cases, however, users must repair or update certain features to newer versions, prior to applying SP4. Table 1 (below) lists the Windows NT Server 4.0 features that must be repaired or updated *before* applying SP4, along with specific repair/update instructions.

*Table 1.*

| Feature Name | Version | Action Required Prior to Step 2 |
|---|---|---|
| Active Directory Services Interface | 1.0 | Install ADSI 2.0 from: http://www.microsoft.com/ntserver/nts/downloads/other/ADSI2/default.asp |
| Microsoft Virtual Machine | See Action for Description | Some versions of the Microsoft Virtual Machine, including the versions that shipped with SP4 and with some versions of Internet Explorer, have Year 2000 date-related issues. Please refer to the Microsoft VM Y2K Product Guide at http://www.microsoft.com/technet/promo/javavm.htm for details and recommendations to address known issues. |
| Microsoft FrontPage 97 | '97' | Install FrontPage 97 Year 2000 hot fixes from http://officeupdate.microsoft.com/updates/updfrontpage.htm |
| Microsoft FrontPage 97 Server Extensions | '97' | Install FrontPage 98 Server Extensions from the Windows NT Option Pack. Also see Note 1. |
| Microsoft Internet Locator Service | 1.0 | Install Microsoft Internet Locator Service Version 2.0 from http://www.microsoft.com/netmeeting/ils/ |
| Microsoft Transaction Server | 1.0 | Install Microsoft Transaction Server 2.0 from the Windows NT Option Pack |
| Microsoft Transaction Server | 1.1 | Install Microsoft Transaction Server 2.0 from the Windows NT Option Pack |

**Step 2**

Apply SP4 to the Target System. SP4 can be obtained at:

http://www.microsoft.com/support/winnt/sp4_central_40.htm

The installation of SP4 applies fixes to the base Windows NT Server 4.0 product including the installation options. Applying SP4 also fixes certain Windows NT Server 4.0 features. Additionally, users must then run the Y2KSETUP.EXE program that is part of SP4, (also on the SP4 CD) if any of the following features are installed on the Target System:

- Microsoft Data Access Components Version 1.5
- Microsoft Data Access Components Version 2.0
- Site Server Express Version 2.0
- Microsoft Internet Explorer Version 4.01

Note: Users that have both Microsoft Message Queue Service Version 1.0 and Site Server Express Version 2.0 installed on their Windows NT Server 4.0 machines should review the following Microsoft Knowledge Base article before running Y2KSETUP.EXE:

http://support.microsoft.com/support/kb/articles/q197/5/33.asp

**Step 3:**

Overview:

The final step of the process is to audit the target system to verify that Step 1 and Step 2 have been performed correctly.

- Create a list of the Windows NT Server 4.0 installation options and additional features installed on the target system
- Review the compliance status of the installation options and features using Tables 2 & 3.
- Confirm that only installation options and features having a "compliant" rating (as identified on the tables below) remain on the target system after Steps 1 and 2 have been completed.

Detail:

When users load the Windows NT Server 4.0 operating system on a computer they are asked to select from many installation options. These options are listed in Table 2 (below). The known Year 2000 issues with Windows NT Server 4.0 operating system itself and each of the options listed in Table 2 below should be fixed after applying SP4.

*Table 2*

| Option/Server Name | Compliance Rating |
|---|---|
| DHCP Relay Agent | Compliant |
| DLC Protocol | Compliant |
| Gateway Services for NetWare | Compliant |
| Microsoft DHCP Server | Compliant |
| Microsoft DNS Server | Compliant |
| Microsoft TCP/IP Printing | Compliant |
| NetBEUI Protocol | Compliant |
| NetBIOS Interface | Compliant |
| Network Monitor Agent | Compliant |
| Network Monitor Tools and Agent | Compliant |
| NWLink IPX/SPX-Compatible Transport | Compliant |
| Point To Point Tunneling Protocol | Compliant |
| Remote Access Service | Compliant |
| Remote Boot Service | Compliant |
| RIP for Internet Protocol | Compliant |
| RIP for NWLink IPX/SPX-Compatible Transport | Compliant |
| RPC Configuration | Compliant |
| RPC Configuration | Compliant |
| RPC Support for Banyan | Compliant |
| SAP Agent | Compliant |

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| | | | |
|---|---|---|---|
| Server | | | Compliant |
| Services for Macintosh | | | Compliant |
| Simple TCP/IP Services | | | Compliant |
| SNMP Service | | | Compliant |
| Streams Environment | | | Compliant |
| TCP/IP Protocol | | | Compliant |
| Windows Internet Name Service | | | Compliant |
| Workstation | | | Compliant |

In addition to the selectable options offered during installation of the Windows NT Server 4.0 operating system, there are additional features of the Windows NT Server 4.0 product that may be installed on the Target System. These features have been made available by Microsoft via Service Packs, the Windows NT Option Pack and the Windows NT Server Web site.

Table 3 (below) lists the additional features (and their versions) that Microsoft has made available to licensed users of the Windows NT Server 4.0 product since its original release. Use this table to verify the compliance of each Windows NT Server 4.0 feature installed on the Target System.

### *Table 3*

| Feature Name | Version | Feature Compliance Rating | Notes |
|---|---|---|---|
| Active Directory Services Interface | 1.0 | Not Tested | See Note 2 |
| Active Directory Services Interface | 2.0 | Compliant | |
| Certificate Server | 1.0 | Compliant | See Note 4 |
| Distributed File Service | 4.0 | Compliant | |
| Distributed File Service | 4.1 | Compliant | |
| Imaging for Windows | N/A | Compliant | Applies to all Versions that run on Windows NT Server 4.0 |
| Index Server | 1.0 | Compliant | |
| Index Server | 1.1 | Compliant | |
| Index Server | 2.0 | Compliant | |
| Internet Connection Services for Microsoft Remote Access Service | 1.0 | Compliant | |
| Microsoft Cluster Services | 1.0 | Compliant | |
| Microsoft Data Access Components (MDAC) | 1.5 | Compliant with Minor Issues | See Note 3 |
| Microsoft Data Access Components (MDAC) | 2.0 | Compliant with Minor Issues | See Note 3 |
| Microsoft Data Access Components (MDAC) | 2.0 SP1 | Compliant | To determine that MDAC 2.0 SP1 is installed, verify the version number of the file named: "(system directory)\program files\common files\system\ole db\msdadc.dll" is at least02.00.3002.23. See note 7 for instructions on verifying version numbers of .DLL files. |

| | | | |
|---|---|---|---|
| Microsoft Euro Currency Support for Windows NT 4.0 | N/A | Compliant | |
| Microsoft Front Page | 1.0 | Not Compliant | See Note 2 |
| Microsoft Front Page | 1.1 | Not Compliant | See Note 2 |
| Microsoft FrontPage 97 | '97' | Not Compliant | See Note 2 |
| Microsoft FrontPage 97 Server Extensions | '97' | Not Compliant | See Note 2 |
| Microsoft FrontPage 97 | '97' W/Fixes | Compliant | To determine that Microsoft Front Page 97 fixes are installed, verify the version number of the file named: "(system directory)\system32\fp20tl.dll" is at least02.00.3002.23. See note 7 for instructions on verifying version numbers of .DLL files. |
| Microsoft FrontPage 98 Server Extensions | '98' | Compliant | |
| Microsoft Internet Explorer | 2.00 | Not Tested | See Note 3 |
| Microsoft Internet Explorer | 3.02 | Not Compliant | See Note 3 |
| Microsoft Internet Explorer | 3.02 W/Fixes | Compliant | To determine that Microsoft Internet Explorer Version 3.02 fixes are installed, verify the version number of the file named: "(system directory)\system32\wininet.dll" is in the range of either:<br>• 4.70.0.1335 to 4.70.0.1399 (for browsers with "File Upload" features enabled)<br>or<br>• 4.70.0.1460 to 4.70.0.1499 (for browsers without "File Upload" features enabled)<br>See note 7 for instructions on verifying version numbers of .DLL files. |
| Microsoft Internet Explorer | 4.01 | Not Compliant | See Note 3 |

| | | | |
|---|---|---|---|
| Microsoft Internet Explorer | 4.01 SP1 | Compliant | To determine that Microsoft Internet Explorer Version 4.01 SP1 is installed, verify the version number of the file named: "(system directory)\system32\comctl32.dll" is at least 4.70.3110.9 or higher. See note 7 for instructions on verifying version numbers of .DLL files. Note: The Compliant rating of Internet Explorer Version 4.01 SP1 is based on having a Compliant version of the Microsoft Virtual Machine installed on the Target Machine. See Table 1 for more information. |
| Microsoft Internet Information Server | 2.0 | Compliant | |
| Microsoft Internet Information Server | 3.0 | Compliant | |
| Microsoft Internet Information Server | 4.0 | Compliant | |
| Microsoft Internet Locator Service | 1.0 | Not Compliant | See Note 2 |
| Microsoft Internet Locator Service | 2.0 | Compliant | |
| Microsoft Management Console | 1.0 | Compliant | |
| Microsoft Message Queue Server | 1.0 | Compliant | |
| Microsoft Message Queue Server | 1.0E | Compliant | |
| Microsoft Transaction Server | 1.0 | Not Tested | See Note 2 |
| Microsoft Transaction Server | 1.1 | Not Tested | See Note 2 |
| Microsoft Transaction Server | 2.0 | Compliant | |
| Microsoft Transaction Server | 2.0 SP | Compliant | |
| Microsoft Virtual Machine | Updated Microsoft VM versions 2436 or 3165 - or newer | Compliant | |
| NetShow Services | 1.0 | Not Tested | See Note 3 |
| NetShow Services | 3.0 | Compliant | |
| Routing and Remote Access Services | 4.0 | Compliant | |
| Site Server Express | 2.0 | Not Compliant | See Note 3 |
| Site Server Express | 3.0 | Compliant | See Note 5 |
| TAPI SDK | 2.1 | Compliant | |

| | | | |
|---|---|---|---|
| Web Administrator for Microsoft Windows NT Server 4.0 | 2.0 | Compliant | |
| Windows Management Interface (WMI) | 1.0 | Compliant | |
| Windows Media Player | 6.0 | Compliant | To verify that Windows Media Player 6.0 is installed, users should select "Help/About Windows Media Player" from within Windows Media Player and verify that the version number is 5.01.52.0701 or greater. |
| Windows Scripting Host | 1.0 | Compliant | |
| Zero Administration Kit for Windows NT 4.0 | N/A | Compliant | See Note 6 |
| Zero Administration Kit for Windows NT 4.0, Terminal Server Edition | N/A | Compliant | See Note 6 |

**Conclusion**:

If **all** of the Windows NT Server 4.0 features that remain on the system after performing Step 1 and Step 2 are listed as "Compliant" in the table below, Steps 1 and 2 were conducted correctly and the copy of Windows NT Server 4.0 on the Target System should have no known Year 2000 issues. If a feature with a "Not Compliant" rating remains on the Target System, the most likely cause is a failure to perform both Step 1 and Step 2 to completion. In this case, please review/retry those steps and associated actions.

**Notes:**

1. To determine which versions of FrontPage Server Extensions are actively in use on a system, run the FrontPage Server Administrator (Fpsrvwin.exe). Click on each of the Web servers or virtual servers (listed in the box in the upper left area) that have been configured with the FrontPage Server Extensions. The version number of the FrontPage Server Extension is displayed to the right of the list. Version numbers where the first digit is '3' or greater resolve known Year 2000 issues (e.g. 3.0.2.1706). If the first digit of the version number is '1' or '2', users should install an updated version of the FrontPage Server Extensions. Refer to http://www.microsoft.com/frontpage for more details.
2. This *Not Compliant* version of this feature should only be present if the procedures outlined in Step 1 have not been performed correctly.
3. This *Not Tested* or *Not Compliant* version of this feature should only be present if the procedures outlined in Step 2 have not been performed correctly.
4. Certificate Server Version 1.0 cannot be installed on 2/29/2000.
5. There is no Content Analyzer feature in Site Server Express 3.0. A replacement version that is Year 2000-compliant will be made available.
6. The *Compliant* ratings for Zero Administration Kits (ZAK kit) are based on being used with *Compliant* versions of the software configured for installation by the ZAK kit.
7. To verify the version number of a dynamic link library (DLL) file, users should:
- Start Windows NT Explorer from the Start/Programs menu
- Locate the DLL file to be verified
- Select the file by pointing the mouse cursor at the file clicking the left mouse button once
- Click the right mouse button once to display a menu
- Select "Properties" from the menu by pointing the mouse cursor at the option and clicking the left mouse button once
- Select the "Version" tab by pointing the mouse cursor at the tab and clicking the left mouse button once
- Visually Locate the version number in the field labeled "File Version"

**Appendix**:

For convenience, the Table 4 (below) lists features and products that Microsoft has made available on the Windows NT Server web site that Microsoft does not consider to be part of the Window NT Server 4.0 product for Year 2000 compliance purposes.

*Table 4*

| Feature/Product Name | Notes |
| --- | --- |
| ADSI Implemented in Java | Available only in Beta test versions |
| Client 32 support for NetWare | This is a Novell product; consult Novell for compliance information |
| Dial-Up Networking Access Service Performance and Security Upgrade | Applies only to Windows 95 systems should not be present on a Windows NT Server 4.0 system |
| I2O (Intelligent I/O Architecture) Drivers for Windows NT | Available only in Beta test versions |
| Microsoft Windows NT Services for UNIX | Available only in Beta test versions |

| | |
|---|---|
| Personal Web Services 4.0 | Runs only on Windows NT Workstation 4.0 and Windows 98 and should not be present on a Windows NT Server 4.0 system |
| Routing and Remote Access Service Performance and Security Upgrade | This is a collection of hot fixes that have no impact on Year 2000 compliance ratings |
| Routing and Remote Access Service Upgrade for Windows NT Server | This is a collection of hot fixes that have no impact on Year 2000 compliance ratings |
| Windows NT Server Management Tools for Windows 95 | Runs only on Windows NT Workstation 4.0 and Windows 98 and should not be present on a Windows NT Server 4.0 system |

# C.3 Vendor Data - MS DOS 6.22

Microsoft Year 2000 Readiness Disclosure & Resource Center

**MS-DOS 6.22 (English) - DOS**

### Product Summary

| | |
|---|---|
| Product: MS-DOS | Category: Compliant with minor issues |
| Version: 6.22 | Operating System: DOS |
| Language: English | Release Date: 31 May 1994 |
| Operational Range: | - |
| Prerequisites: | NONE |
| Product Dependencies: | NONE |
| Clock Dependencies: | PC BIOS |
| Last Updated: | 21 Jan 1999 |

### Product Details

Operational Range for Data: 2035

Description of how the product handles dates:

MS-DOS recognizes dates beyond the year 2000. It does not display the full year, but will sort files correctly.

Two-digit shortcut handling:

If a 2-digit date is entered, the operating system will assume that the date entered is in the 20$^{th}$ century.

The MS-DOS® DATE command does not correctly handle 2-digit dates from 00–79. This command returns the error message "Invalid Date." Dates entered using a 4-digit year are handled correctly (e.g. 01-01-2000).

MS-DOS® DATE command is the only operating system command that accepts dates. See the note above for the 2-digit year logic.

MS-DOS® file system APIs use a year offset from 1980 to store dates. When a program gets a date from an MS-DOS® API the program must add 1980.

Product compliance issues:

MS-DOS cannot display a 4-digit date, using the DIR command (internal to COMMAND.COM).

MS-DOS will not accept 2-digit date changes for the year 2000 and beyond. To enter the correct date, a 4-digit year must be entered to the DATE command (internal to COMMAND.COM). Failure to enter the correct 4-digit date will result in an "Invalid Date" error.

MSBACKUP: Naming conventions do not recognize "tens" place.

MSBACKUP from MS-DOS 6.22 creates a catalogue of the backups using a YMMDD format. When a backup is made with the same number in the "ones" place and a different number in the "tens" place (i.e., 1996 and 2006), MSBACKUP treats them as being made on the same date. They are numbered accordingly with a letter following the date to indicate that they are different.

For example, the following series appeared on the DOS 6.22 system:

CC60829A.FUL (No Description) was created on 8/29/1996
CC60829B.FUL (No Description) was created on 8/29/2006
CC60829B.FUL (No Description) was created on 8/29/1996

The actual date of the backup can be found by opening the .FUL file and scrolling to the next to the last line. There it is shown in the MM-DD-YY format.

MSBACKUP does not recognize dates greater than 1999.

MSBACKUP creates a date stamp on the backup files. When an attempt is made to create a backup over an existing backup, MSBACKUP displays a warning to prevent the user from destroying the file. The warning reads, for example,

"You have inserted Backup diskette #2 from backup set CC60828B.FUL. This diskette was created using the DEFAULT setup on 8-28-96. Do you want to overwrite this diskette or retry using another diskette?"

When the date the backup was made is greater than 1999, the date is improperly displayed; e.g., "This diskette was created using the DEFAULT setup on 8-29-CZ."

For example:

CC60829B.FUL = 8-29-CZ (system date = 8/29/2006)

CC60828A.FUL = 8-28-CZ (system date = 8/28/2006)

CC10829A.FUL = 8-29-AC (system date = 8/29/2001)

Recommendations to meet compliance:

There are no patches available at this time. The commands described above are infrequently used and easily worked around. This date issue does not constitute a significant threat to the stability and/or functionality of the product as a whole.

Testing guidelines and recommendations:

Some PCs do have a problem that resets the system date to 1980 or other invalid dates when the computer reaches the year 2000. This problem is created by flaws in the computer hardware and in low-level BIOS software provided by other vendors. If you are going to test for this error, Microsoft recommends that you execute the tests on a "test-bed" machine rather than a production machine. Please see the PC BIOS section of the Year 2000 Product Guide for further information.

# C.4 Vendor Data – Windows 95

Microsoft Year 2000 Readiness Disclosure & Resource Center

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**Windows 95 OSR 1, 4.00.950 (English) - 32-Bit Win**
**Product Summary**

| | |
|---|---|
| Product: Windows 95 | Category: Compliant with minor issues |
| Version: OSR 1, 4.00.950 | Operating System: 32-Bit Win |
| Language: English | Release Date: 07 Jul 1995 |
| Operational Range: | - |
| Prerequisites: | None |
| Product Dependencies: | None |
| Clock Dependencies: | PC Bios |
| Last Updated: | 07 Jan 1999 |

**Product Details**
**Operational Range for Data:** 1980-2035
**Product Details**
**Updates:** There are updated versions of WINFILE.EXE and COMMAND.COM that address the two issues described below. For more information see Knowledge Base article Q182967.
These updates do not address all of the issues listed in the Product Issues section below. Windows 95 remains Compliant-with-minor-issues with *or* without these updates.
**How the product handles dates:**
- **Storage.** Dates are stored internally as 4-digit dates. MS-DOS file system APIs are an exception. MS-DOS file system APIs use a year offset from 1980 to store dates. When a program gets a date from an MS-DOS API the program must add 1980.
- **Two-digit shortcut handling:** MS-DOS DATE command will not accept 2-digit date changes for the year 2000 and beyond. To enter the correct date, a 4-digit year must be entered to the DATE command (internal to COMMAND.COM). Failure to enter the correct 4-digit date will result in an "invalid date" message. This issue is fixed by the updated version of COMMAND.COM.
  Also, the MS-DOS file system APIs return a year offset from 1980. The programmer has to add 1980 to the date value returned to get the appropriate date. Win32 APIs are not affected by this.

**Product Issues:**

**WINFILE.EXE** - Windows File Manager does not display or sort dates beyond the year 2000 appropriately. When using Windows File Manager to view the contents of folders, and users have selected to view "all file details", the dates of files created in the year 2000 and beyond may appear as follows:

- January 1, 2000 would appear as 1/1/;1

- February 3, 2023 would appear as 2/3/>3

- March 5, 2036 would appear as 3/5/=6

**COMMAND.COM** - The DATE command (internal to COMMAND.COM) does not appropriately handle 2-digit dates from 00-79. Entering 2-digit dates within this

range returns the message "Invalid Date".

**SHELL32.DLL** - The "Find File" or "Folders Dialog" Date tab displays the year in YY format. This format results in non-numeric displays for years greater than 2000. For example, entering 03/20/2003 will display as 03/20/C3. However this does not effect the search. When searching for files changed within a certain date range, enter a 2-digit or 4-digit date and the search will be performed based on the dates entered.

**COMCTL32.DLL** – When Regional Settings from Control Panel is set to use two digits for years, the Date/Time Picker function may not return the proper date. To ensure proper handling of dates: set Regional Settings to 4-digit date handling,

**VDHCP.386** - Winipcfg/all - IP Leases obtained on or after 3/01/2000 are reported as having been obtained the previous day. The system date is displayed correctly but the DHCP client reports an incorrect date.

**TIMEDATE.CPL** –Time and Date control applet - When the date is set to February 29 the applet will display the 29$^{th}$ day on years other than leap years when using the tumblers to scroll the year ahead or back.

**DIALER.EXE** - Phone Dialer applet - The show call log option doesn't display date correctly after successful completion of telephone call. If date is adjusted to the year 2000, the date will display as 100, 101, 102, etc.

**XCOPY.EXE** – When using xcopy in real mode with the optional parameter /D:date, xcopy does not accept years entered as 2 digits except for the years 80 - 99. The message "Invalid date" is displayed. When using xcopy in protected mode (from within Windows) 2-digit dates are accepted but are recognized as being within the 20th century (02/05/01 is seen as 02/05/1901).

**Testing guidelines and recommendations:**
Some PCs reset the system date to 1980 or other invalid dates when the computer reaches the year 2000. This problem is created by flaws in the computer hardware and in low-level BIOS software provided by other vendors. If users are going to test for this error, Microsoft recommends executing the tests on a "test-bed" machine rather than a production machine. Please see the BIOS article in the whitepaper section of this product guide for further information.

# C.5 Vendor Data – MS Windows NT Workstation sp4

Microsoft Year 2000 Readiness Disclosure & Resource Center

Windows NT Workstation 4.0 SP4 (English) - Win NT
Product Summary

| | |
|---|---|
| Product: Windows NT Workstation Version: 4.0 SP4 | Category: Compliant Operating System: Win NT |
| Language: English | Release Date: 29 Jul 1996 |
| Operational Range: | 01 Jan 1996 - 31 Dec 2036 |
| Prerequisites: | (see below) |
| Product Dependencies: | None |
| Clock Dependencies: | System clock |
| Last Updated: | 22 Jan 1999 |

Product Details

The current Windows NT 4 Service Pack 4 (SP4) combined with the following actions addresses known Year 2000 issues. The compliance rating for Windows NT Workstation 4.0 above is dependent upon completing the steps below.

Windows NT 4 has had a number of service packs since its release. To reach a compliant state with Windows NT 4, service pack 4 must be installed. Additionally, Microsoft intends to maintain compliance at the most recent service pack level, so should any issue be subsequently identified, the patches will be applied to the current service pack – today SP4.

## Introduction

When users load the Windows NT Workstation 4.0 operating system on a computer they are asked to select from many installation options. In addition, Microsoft has made additional Windows NT Workstation 4.0 features available to licensed users via Service Packs, the Windows NT Option Pack and the Windows NT Web site. Because users may have selected a variety of options and installed additional features on a given system, all options and features must be considered when assessing the system's Year 2000 readiness status.

Microsoft has determined that Windows NT Workstation 4.0 and some versions of additional Windows NT Workstation 4.0 features have known Year 2000 issues, requiring upgrades. In order to fix these known Year 2000 issues, users must first determine the set of options and features that they have installed on a given system (the "*Target System*") and follow the three-step procedure described below. In some cases the Year 2000 issue can be fixed by users applying fixes. In other cases, users are instructed to upgrade a feature to a newer version of the feature to fix known issues.

The steps identified below take a comprehensive approach to correcting known issues.

- Step 1 prepares the target system for SP4 by addressing any upgrades that are needed before SP4 is applied.
- Step 2 installs SP4 to analyze the target system, remove versions which have known issues, and install versions that have no known issues.
- Step 3 then audits the target system. To confirm all known issues have been corrected and steps 1 and 2 have been done correctly, the results of the audit should indicate that only those versions having a "complaint" rating (as

identified on the tables below) remain on the target system after Steps 1 and 2 have been completed.

**Important Preliminary Notes:**

- The fix to the Microsoft Virtual Machine described in Table 1 can be applied either before or after applying SP4 to the target system.

## Step 1

Microsoft has created Service Pack 4 (SP4) to help users address the majority of Year 2000 compliance issues with their Windows NT Workstation installations in a simple and automated fashion.

In most cases, applying SP4 will correct known Year 2000 issues. In a small number of cases, however, users must repair or upgrade certain features to their later releases, prior to applying SP4.

Table 1 (below) lists the Windows NT Workstation 4.0 features that must be repaired or upgraded *before* applying SP4, along with specific repair/upgrade instructions.

### *Table 1.*

| Feature Name | Version | Action Required Prior to Step 2 |
|---|---|---|
| Microsoft FrontPage 97 | '97' | Install FrontPage 97 hot fixes from http://officeupdate.microsoft.com/updates/updfrontpage.htm |
| Microsoft FrontPage 97 Server Extensions | '97' | Install FrontPage 98 Server Extensions from the Windows NT Option Pack. Also see Note 1. |
| Microsoft Virtual Machine | See Action for Description | Some versions of the Microsoft Virtual Machine, including the versions that shipped with SP4 and with some versions of Internet Explorer, have Year 2000 date-related issues. Please refer to the Microsoft VM Y2K Product Guide at http://www.microsoft.com/technet/promo/javavm.htm for details and recommendations to address known issues. |

### Step 2

## Step 2

Apply SP4 to the Target System. SP4 can be obtained at:
http://www.microsoft.com/support/winnt/sp4_central_40.htm

The installation of SP4 applies fixes to the base Windows NT Server 4.0 product including the installation options. Applying SP4 also fixes certain Windows NT Workstation 4.0 features.

Additionally, users must then run the Y2KSETUP.EXE program that is part of SP4, (also on the SP4 CD) if any of the following features are installed on the Target System:

- Microsoft Data Access Components Version 1.5
- Microsoft Data Access Components Version 2.0
- Site Server Express Version 2.0
- Microsoft Internet Explorer Version 4.01

Note: Users that have both Microsoft Message Queue Service Version 1.0 and Site Server Express Version 2.0 installed on their Windows NT Server 4.0 machines should review the following Microsoft Knowledge Base article before running Y2KSETUP.EXE:
http://support.microsoft.com/support/kb/articles/q197/5/33.asp

## Step 3:

Overview:

The final step of the process is to audit the target system to verify that Step 1 and Step 2 have been performed correctly.

- Create a list of the Windows NT Workstation 4.0 installation options and additional features installed on the target system.
- Review the compliance status in Tables 2 & 3.

- Confirm that only those versions having a "complaint" rating (as identified on the tables below) remain on the target system after Steps 1 and 2 have been completed.

Detail:

When users load the Windows NT Workstation 4.0 operating system on a computer they are asked to select from many installation options. These options are listed in Table 2 (below). The known Year 2000 issues with Windows NT Workstation 4.0 operating system itself and each of the options listed in Table 2 below should be fixed after applying SP4.

### *Table 2*

| Option/Server Name | Compliance Rating |
|---|---|
| DLC Protocol | Compliant |
| Microsoft TCP/IP Printing | Compliant |
| NetBEUI Protocol | Compliant |
| NetBIOS Interface | Compliant |
| Network Monitor Agent | Compliant |
| Network Monitor Tools and Agent | Compliant |
| NWLink IPX/SPX-Compatible Transport | Compliant |
| Point To Point Tunneling Protocol | Compliant |
| Remote Access Service | Compliant |
| Remote Boot Service | Compliant |
| RIP for Internet Protocol | Compliant |
| RIP for NWLink IPX/SPX-Compatible Transport | Compliant |
| Simple TCP/IP Services | Compliant |
| SNMP Service | Compliant |
| Streams Environment | Compliant |
| TCP/IP Protocol | Compliant |

In addition to the selectable options offered during installation of the Windows NT Workstation 4.0 operating system, there are additional features of the Windows NT Workstation 4.0 product that may be installed on the Target System. These features have been made available by Microsoft via Service Packs, the Windows NT Option Pack and the Windows NT Workstation Web site.

Table 3 (below) lists the additional features (and their versions) that Microsoft has made available to licensed users of the Windows NT Workstation 4.0 product since its original release. Use this table to verify the compliance of each Windows NT Workstation 4.0 feature installed on the Target System.

## Table 3

| Feature Name | Version | Feature Compliance Rating | Notes |
|---|---|---|---|
| Active Directory Services Interface | 1.0 | Not Compliant | See Note 2 |
| Active Directory Services Interface | 2.0 | Compliant | |
| Imaging for Windows | N/A | Compliant | Applies to all versions that run on Windows NT Workstation 4.0 |
| Internet Connection Services for Microsoft Remote Access Service | 1.0 | Compliant | |
| Microsoft Data Access Components (MDAC) | 1.5 | Compliant with Minor Issues | See Note 3 |
| Microsoft Data Access Components (MDAC) | 2.0 | Compliant with Minor Issues | See Note 3 |
| Microsoft Data Access Components (MDAC) | 2.0 SP1 | Compliant | To determine that MDAC 2.0 SP1 is installed, verify the version number of the file named: "(system directory)\program files\common files\system\ole db\msdadc.dll" is at least 02.00.3002.23. See note 6 for instructions on verifying version numbers of .DLL files. |
| Microsoft Euro Currency Support for Windows NT 4.0 | N/A | Compliant | |
| Microsoft Front Page | 1.0 | Not Compliant | See Note 2 |
| Microsoft Front Page | 1.1 | Not Compliant | See Note 2 |
| Microsoft FrontPage 97 | '97' | Not Compliant | See Note 2 |
| Microsoft FrontPage 97 Server Extensions | '97' | Not Compliant | See Note 2 |
| Microsoft FrontPage 97 | '97' W/Fixes | Compliant | To determine that Microsoft Front Page 97 fixes are installed, verify the version number of the file named: "(system directory)\system32\fp20tl.dll" is at least 02.00.3002.23. See note 6 for instructions on verifying version numbers of .DLL files. |
| Microsoft FrontPage 98 Server Extensions | '98' | Compliant | |
| Microsoft Internet Explorer | 2.00 | Not Compliant | See Note 3 |
| Microsoft Internet Explorer | 3.02 | Not Compliant | See Note 3 |

| | | | |
|---|---|---|---|
| Microsoft Internet Explorer | 3.02 W/Fixes | Compliant | To determine that Microsoft Internet Explorer Version 3.02 fixes are installed, verify the version number of the file named: "(system directory)\system32\wininet.dll" is in the range of either:<br>• 4.70.0.1335 to 4.70.0.1399 (for browsers with "File Upload" features enabled)<br>or<br>• 4.70.0.1460 to 4.70.0.1499 (for browsers without "File Upload" features enabled)<br>See note 6 for instructions on verifying version numbers of .DLL files. |
| Microsoft Internet Explorer | 4.01 | Not Compliant | See Note 3 |
| Microsoft Internet Explorer | 4.01 SP1 | Compliant | To determine that Microsoft Internet Explorer Version 4.01 SP1 is installed, verify the version number of the file named: "(system directory)\system32\comctl32.dll" is at least 4.70.3110.9 or higher. See note 7 for instructions on verifying version numbers of .DLL files.<br>Note: The Compliant rating of Internet Explorer Version 4.01 SP1 is based on having a Compliant version of the Microsoft Virtual Machine installed on the Target Machine. See Table 1 for more information. |
| Microsoft Internet Information Server | 2.0 | Compliant | |
| Microsoft Internet Information Server | 3.0 | Compliant | |
| Microsoft Internet Information Server | 4.0 | Compliant | |
| Microsoft Internet Locator Service | 1.0 | Not Compliant | See Note 2 |
| Microsoft Internet Locator Service | 2.0 | Compliant | |
| Microsoft Management Console | 1.0 | Compliant | |
| Microsoft Virtual Machine | Updated Microsoft VM versions 2436 or 3165 - or newer | Compliant | |

| | | | |
|---|---|---|---|
| Routing and Remote Access Services | 4.0 | Compliant | |
| Site Server Express | 2.0 | Not Compliant | See Note 3 |
| Site Server Express | 3.0 | Compliant | See Note 4 |
| Windows Management Interface (WMI) | 1.0 | Compliant | |
| Windows Media Player | 6.0 | Compliant | To verify that Windows Media Player 6.0 is installed, users should select "Help/About Windows Media Player" from within Windows Media Player and verify the version number is 5.01.52.0701 or greater. |
| Zero Administration Kit for Windows NT 4.0 | N/A | Compliant | See Note 5 |

**Conclusion**:

If **all** of the Windows NT Workstation 4.0 features that remain on the system after performing Step 1 and Step 2 are listed as "Compliant" in the table, Steps 1 and 2 were conducted correctly and the copy of Windows NT Workstation 4.0 on the Target System should have no known Year 2000 issues. If a feature with a "Not Compliant" rating remains on the Target System, the most likely cause is a failure to perform both Step 1 and Step 2 to completion. In this case, please review/retry those steps and associated actions.

**Notes:**

1. To determine which versions of FrontPage Server Extensions are actively in use on a system, run the FrontPage Server Administrator (Fpsrvwin.exe). Click on each of the Web servers or virtual servers (listed in the box in the upper left area) that have been configured with the FrontPage Server Extensions. The version number of the FrontPage Server Extension is displayed to the right of the list. Version numbers where the first digit is '3' or greater resolve known Year 2000 issues (e.g. 3.0.2.1706). If the first digit of the version number is '1' or '2', users should install an updated version of the FrontPage Server Extensions. Refer to http://www.microsoft.com/frontpage for more details.
2. This *Not Compliant* version of this feature should only be present if the procedures outlined in Step 1 have not been performed correctly.
3. This *Not Compliant* version of this feature should only be present if the procedures outlined in Step 2 have not been performed correctly.
4. There is no Content Analyzer feature in Site Server Express 3.0. A replacement version that is Year 2000-compliant will be made available.
5. The *Compliant* ratings for Zero Administration Kits (ZAK kit) are based on being used with *Compliant* versions of the software configured for installation by the ZAK kit.
6. To verify the version number of a dynamic link library (DLL) file, users should:
- Start Windows NT Explorer from the Start/Programs menu
- Locate the DLL file to be verified
- Select the file by pointing the mouse cursor at the file clicking the left mouse button once
- Click the right mouse button once to display a menu
- Select "Properties" from the menu by pointing the mouse cursor at the option and clicking the left mouse button once
- Select the "Version" tab by pointing the mouse cursor at the tab and clicking the left mouse button once
- Visually Locate the version number in the field labeled "File Version."

**Appendix**:

For convenience, the Table 4 (below) lists features and products that Microsoft has made available on the Windows NT Workstation web site that Microsoft does not consider to be part of the Window NT Workstation 4.0 product for Year 2000 compliance purposes.

### *Table 4*

| Feature/Product Name | Notes |
|---|---|
| ADSI Implemented in Java | Available only in Beta test versions |
| Client 32 support for NetWare | This is a Novell product; consult Novell for compliance information |
| Dial-Up Networking Access Service Performance and Security Upgrade | Applies only to Windows 95. |
| I2O (Intelligent I/O Architecture) Drivers for Windows NT | Available only in Beta test versions |

| | |
|---|---|
| Microsoft Windows NT Services for UNIX | Available only in Beta test versions |
| Personal Web Services 4.0 | Runs only on Windows NT Workstation 4.0 and Windows 98. |
| Routing and Remote Access Service Performance and Security Upgrade | This is a collection of hot fixes that have no impact on Year 2000 compliance ratings |
| Windows NT Server Management Tools for Windows 95 | Runs only on Windows NT Workstation 4.0 and Windows. |

# C.6 Vendor Data – Lotus Notes

## Notes & Domino architecture for handling Date/time information

**Storage of Time/Date data**

Since release 1.0 of the Notes and Domino products, the data structure for storing the year portion of a date has been 4 digits. Although only two digits are typically entered by the user and displayed in date fields on the screen, the Notes and Domino products store the year portion of the date as the full four digits year. For example, if you type the date 1/1/97 in a date field in Notes, the year that is actually stored and used for calculations is "1997", not just "97".

Notes' internal TIMEDATE structure stores the dates in such a way that they can be manipulated in formulas, regardless of the year or any other part of the date. Program interfaces, such as APIs, control blocks, services, and data, all handle dates using 4-digits (YYYY) to represent the year. It is important to note that although the Notes APIs and infrastructures correctly handle dates, it is possible for poorly written applications to loosely and incorrectly handle dates.

The Lotus Notes product internally supports up to the year 32767 on 16-bit operating systems (limited by a 15-bit year quantity in our TIME structure), and the year 41247 on 32-bit operating systems (limited by a 24-bit Julian date quantity in our TIMEDATE structure).

**Interpretation of 2-digit date entry**

It has always been possible to input 4 digit years in all versions of the Notes and Domino products thereby avoiding any possible 2 digit year date interpretation problems. However, many applications developed for the Notes environment have been designed to accept only a 2 digit year input.

In Notes R4.1 and prior, 2-digit year dates are interpreted as the 20th century. For example; if a user were to enter "14", Notes would interpret the entry to be "1914".

Beginning with release 4.5 of Notes and Domino products, additional logic for the interpretation of 2-digit year dates was added. A pivot date of 1950 is used to interpret 2-digit year entry based on the following assumptions. If the 2 digit year is 50 or greater, it is assumed to be in the 20th century (19xx). If the 2 digit year is 49 or less, it is assumed to be in the 21st century (20xx).

**Presentation of dates**

Presentation refers to how data is either displayed on the screen or printed. Since users can determine the century from the context, Lotus Notes was designed to provide a flexible standard called "2-digit unambiguous display".

In release 4.1 and prior, the years 1900 to 1999 displayed as 2 digits. All other date were displayed all 4 digits.
In release 4.5 and 4.6, the years 1950 through 2000 displayed as 2 digit. All other date were

displayed all 4 digits.

Applications developers will want to consider the implications of the change from 2-digit to 4-digit year display on the design of their applications. Please see the <u>White paper on Year 2000 for Application Developers</u> for further information.

In Notes and Domino release 5.0, application developers will have additional flexibility with respect to dates. Domino Designer for release 5 includes the option to have all 4 digit years displayed everywhere, or to choose on a field by field or column by column basis whether 4 digit years should always be displayed.

# C.7 Vendor Data – Word 97

Microsoft Year 2000 Readiness Disclosure & Resource Center

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**Word 97 (English) - 32-Bit Win**
**Product Summary**
Product: **Word**        Category: **Compliant**
Version: 97              Operating System: 32-Bit Win
Language: English        Release Date: 01 Nov 1996
Operational Range: 01 Jan 1900 - 31 Dec 2411
Prerequisites:          See Below
                        Windows 95, Windows 98, or Windows
Product                 NT 3.51 with SP 5 or greater, or
Dependencies:           Windows NT 4 (no specific SP is
                        required, though SP 2 is recommended)
Clock
Dependencies:           System Clock
Last Updated:           14 Sep 1998

## Product Details

**Prerequisites: Download the Office 97 SR2 Patch from http://
officeupdate.microsoft.com/Articles/sr2fact.htm**

**How the product handles dates:**

**Storage.** Date and time values for date usage in Microsoft Word are stored either as simple text strings or as a 32-bit integer. This convention means that the date is represented by a 4-digit year, eliminating the risk of date errors. If the date information is stored in a 32-bit integer, the data is represented by bit fields that have the following ranges:

| | |
|---|---|
| Hours: | 0-23 |
| Minutes: | 0-59 |
| Seconds: | 0-59 |
| Weekday: | 0(Sun)-6(Sat) |
| Day of Month: | 1-31 |
| Year: | 1900-2411 |

Unless otherwise noted, features within Microsoft Word that manipulate dates store the dates as a 32-bit integer. What this means is dates saved with versions of documents retain their 4-digit year designations, regardless of display. Similarly, revision marking date information retains the 4-digit year designations.

**String date parsing.** Other date values, such as might be imported from another program or entered with an Insert Date/Time command, are simple text. Therefore, they are not handled as date values.

The one exception is with the Table/Sort command. In this command, text strings can be interpreted as date values. Two-digit years from 00 to 29 are assumed to be in the 21st century: years 2000–2029. To change this behavior,

users should correct 2-digit years to 4-digit years. There is no validation of the dates in Table/Sort. For example, a date of 2/30/2000 would be sorted before 3/1/2000. Table/Sort interprets the range of years 1900–2035.

A date window of 1930-2029 is used for interpretation of 2-digit dates when using Date formatting (picture switch) of Quote Fields.

In Japanese, Table/Sort does not interpret Double Byte date strings as date values. They are interpreted as plain text. Single byte dates are interpreted as described above.

Saving to an earlier version of Microsoft Word, or upgrading, will not have an affect on dates within a document. Date field information and file properties will be retained and correctly recognized.

**Two-digit shortcut handling:**
Conversion of 2-digit shortcut dates (primarily in table sort and in Microsoft Word fields) assumes a date window of 1930 through 2029.

In Japanese, Emperor dates are designated with digits 1-xxx. Dates will be sorted through this range and are not concerned with year 2000.

**Common date usage errors:**
In general, the entry, importing or formatting of years as 2 digits should be discouraged or eliminated where date calculation dependencies in the user solutions exist. Since most document content, including data entered through Insert Date/Time and Text Form Fields, is stored as plain text, the century information could be improperly derived or assumed by the user solution. Use of Microsoft Word date field types and pre-defined document and file properties for document-related date calculations will ensure that the available information represents a true date.

Because Microsoft Word date fields do not support date arithmetic, we have, in earlier documentation suggested the use of nested formula fields (expressions) to accomplish adding or subtracting days, months, or years to dates. Because simple arithmetic calculations are not calendar-aware, this method is prone to Year 2000-type errors, particularly with 2-digit year values, and is no longer recommended.

**Testing guidelines and recommendations:**
In general, avoid testing in a production environment because we cannot predict side effects with other products. Interoperability testing with other Microsoft Office products can be conducted safely.

The following areas should be looked at to verify dates are being properly used. The table below can be used to guide testing of Microsoft Word within your organization.

| Area | SubArea | Testing Notes |
|------|---------|---------------|
| Edit | Insert Date/Time<br>Table Sort<br>AutoComplete | Insert Date and Time can insert the current date as text formatted as a date, or as a date field that can be updated. Table Sort can interpret text strings as a date, and sort in chronological order, ascending or descending. Two digits can be interpreted as years. '00 through '29 are interpreted to be in the 21st century. Table Sort recognizes the years 1900 through 2035. AutoComplete has a trigger for the current date. |
| File | File Native RTF<br>Text Conversions<br>Graphics Filters<br>Versions Document<br>Properties Revision<br>Marking | Date information is stored in the document for creation date, revision date, and the date the document was last printed. Dates are written to RTF in a four-digit format. Date information is stored with text that is marked for revisions. The date information appears in a ToolTip next to the revised text. When multiple versions of a document are saved, date information is saved with each version. This date information can be viewed in the Versions dialog. |

| | | |
|---|---|---|
| Fields | Date/Time Fields Formula Fields Summary Information Fields Text Form Fields Field Picture Switches | Many fields exist that manipulate date and time information. CreateDate, Date, DocProperty whose properties include CreateTime, LastPrinted, LastSavedTime, and Total Editing Time, EditTime, Info whose types include CreateDate, EditTime, PrintDate, and SaveDate, PrintDate, SaveDate, and Time. In German, the fields DocProperty: Total Editing Time, EditTime and Info: Edit Time are not available. Quote fields and Text Form fields are text fields that can be formatted as dates using field picture switches. Formula fields are designed to calculate text or numbers. |
| Macros VBA WordBasic | | The VBA methods and properties that manipulate date and time information are: Application.OnTime Conversion.CDate Conversion.CVDate DateTime DateTime.Calendar DateTime.Date DateTime.Date$ DateTime.DateAdd DateTime.DateDiff DateTime.DatePart DateTime.DateSerial DateTime.DateValue DateTime.Day DateTime.Hour DateTime.Minute DateTime.Month DateTime.Now DateTime.Second DateTime.Time DateTime.Time$ DateTime.Timer DateTime.TimeSerial DateTime.TimeValue DateTime.WeekDay DateTime.Year FileSystem.FileDateTime Information.IsDate LetterContent.DateFormat Mailer.SendDateTime Range.InsertDateTime Revision.Date Selection.InsertDateTime VbVarType.vbDate Version.Date WdBuiltInProperty.wdPropertyTimeCreated WdBuiltInProperty.wdPropertyTimeLastPrinted WdBuiltInProperty.wdPropertyTimeLastSaved WdBuiltInStyle.wdStyleDate WdFieldType.wdFieldCreateDate WdFieldType.wdFieldDate WdFieldType.wdFieldEditTime WdFieldType.wdFieldPrintDate WdFieldType.wdFieldSaveDate WdFieldType.wdFieldTime WdSortFieldType.wdSortFieldDate WdTextFormFieldType.wdCurrentDateText WdTextFormFieldType.wdCurrentTimeText WdTextFormFieldType.wdDateText WdWordDialog.wdDialogInsertDateTime The WordBasic commands that manipulate date and time information are: AppInfo$(21-26) Date$() DateSerial() DateValue() Day() Days360() DocumentStatistics .Created, .LastSaved, .Printed, .Time GetDocumentProperty$ CreateTime, LastSavedTime, LastPrinted Hour() InsertDateField InsertDateTime InsertTimeField Minute() Month() Now() OnTime Second() Time$() TimeSerial() TimeValue() Today() ToolsRevisionDate() ToolsRevisionDate$() Weekday() Year() |
| Mail | Doc Routing Mail Merge Outlook Journal Posting SendMail WordMail | Mail messages can be sent from within Word. Date and Time functionality that is available with Word is also available within WordMail. |
| Internal | Boot/Quit DDE Environment OLE | No applicable notes. |
| Print | Document Property | The last date that the document was printed is saved with the document. |
| Templates | Templates | In templates, a combination of two digit and four digit years are inserted, and can be modified if necessary. |
| View | Header/Footer Footnotes/Endnotes Comments Status Bar | The CreateDate, Date, and PrintDate fields can be inserted into a document's header or footer via the Header and Footer toolbar. These fields are identical to the fields inserted via the Field dialog. The current date is displayed on the word status bar on NT 3.51. |
| Wizards | Calendar Wizard Letter Wizard | A range of dates can be selected to use with the Calendar Wizard. The Letter Wizard can insert a date into a document. The inserted date is a text string, |

Fax Wizard      formatted as a date. The Fax Wizard inserts a date into a document. The inserted date can be a two digit or four digit year.

# C.8 Vendor Data – Excel 97

Microsoft Year 2000 Readiness Disclosure & Resource Center

**Excel 97 8.0 (English) - 32-Bit Win**
Product Summary

| | |
|---|---|
| Product: **Excel 97** | Category: **Compliant** |
| Version: 8.0 | Operating System: 32-Bit Win |
| Language: English | Release Date: 01 Nov 1996 |
| Operational Range: | 01 Jan 1900 - 31 Dec 9999 |
| Prerequisites: | see below |
| Product Dependencies: | Windows 95, or Windows NT 3.51 with SR 5 or greater, or Windows NT 4 (no specific SR is required, though SR 2 is recommended) |
| Clock Dependencies: | System clock |
| Last Updated: | 14 Jan 1999 |

**Product Details**
**Prerequisites: Download the Office 97 SR2 Patch from**
**http://officeupdate.microsoft.com/Articles/sr2fact.htm**
**Description of how the product handles dates:**
**Storage.** Microsoft Excel stores dates as numeric values, with day #1 being 01/01/1900. Excel 97 recognizes 01-JAN-1900 through 31-DEC-9999 as valid dates. VB/VBA uses the same serial date system, with the exception of 1-JAN-1900 through 28-FEB-1900, where the values are different by 1, as a result of a backward-compatibility issue for a bug in Lotus 1-2-3 that treats 1900 as a leap year. Previous versions of Excel recognize 01-JAN-1900 through 31-DEC-2078 as valid dates.
**Formatting.** When Microsoft Excel formats a date, it uses one of several default formats. The most common is the system short date. If the system short date is a YY format, then even when the user types a YYYY date, it will by default display in a YY format. To avoid this, the default format can be changed to a YYYY format.
**Parsing on date entry.** If a user enters a date in a "M/d/yy" format, less than 30 is 20XX, and equal to or greater than 30 is 19XX. So, for instance, "1/1/25" used to parse to 01-JAN-1925, but now parses to 01-JAN-2025. Suggest displaying dates in a YYYY format so the century is clearly shown.
**String date parsing during calculations.** If a formula takes a string date as an argument, the string date is currently parsed using the same code as the date entry shown above. This may be a concern to some users because a formula such as =YEAR("1/1/25") returned 1925 in previous versions, but in Excel97 returns 2025. Note that this only happens when "1/1/25" is a string using a 2-digit year format. Also, the Date Migration Wizard, an Excel add-in, is available to aid the user in identifying and correcting these situations. See below for more information and a link to the Date Migration Wizard.
**2-digit shortcut handling:**
See discussion above. Conversion of 2-digit shortcut dates assumes a date window of 1930 through 2029.
**Common date usage errors:**
If a date is pasted from one application to another using only the last two digits of the year, Microsoft Excel might parse the date differently than the originating application calculated it. Example: In a non-Excel application, you have the date January 1, 1915.

You copy the date, but your system settings are "M/d/yy", and all that is copied is the text "1/1/15". When you paste "1/1/15" into Microsoft Excel, it will parse the date to January 1, 2015. Such an interpretation can also occur when one application is using a "M/d/yy" format while another application is using a "d/M/yy" format. This also applies to importing dates from text files. (See KB articles Q180159 http://support.microsoft.com/support/kb/articles/Q180/1/59.asp for more information.)

The DATE() function is not designed to take 2-digit year shortcuts, since it receives numeric parameters. The DATE() function calculates a number less than 1900 as an offset from 1900. So, if you were to enter a formula such as =DATE(15,1,1), the resulting date would be January 1, 1915, not 2015.

Using a format such as "Dec 98" will not function correctly in the year 2001. This is because 98 is too large to be the day of month, so Microsoft Excel assumes it is a year. However, Microsoft Excel assumes "Dec 01" refers to December 1 of the current year. Since Microsoft Excel always stores the complete date, you can avoid ambiguity by entering a full date regardless of the display formatting. (See KB article Q180952 http://support.microsoft.com/support/kb/articles/Q180/9/52.asp for more information.)

Due to the ambiguous nature of text dates, in general they will always have some potential for error. Use serial dates whenever possible and take great care when transferring text dates.

Change the default system short date format to include a 4-digit year. Get in the habit of using 4-digit year formats for dates in Microsoft Excel. Such a practice will make the date visible if a user mistakenly enters a date in the wrong century. When dates must be transferred between applications, ideally they should be transferred as serial dates. They should not be transferred as an ambiguous text format that doesn't specify the century and causes confusion between month and day-of-month. For example, the text "2/1/25" could be interpreted as Feb. 1, 1925, Jan. 2, 1925, Feb. 1, 2025, or Jan. 2, 2025.

Defined names store references only as text strings. Since they do not store dates as serial values, they are vulnerable to century issues when a 2-digit year format is used. Using defined names in this way is also or concern because users who use a date format with an order other than M-d-y will experience interpretive miscalculations. Recommended usage is to define the name referring to a cell containing a serial date, which will avoid both of the above-mentioned concerns.

Microsoft has created two add-in tools to help users identify Year 2000 issues in solutions created with Microsoft Excel97:

The Date Migration Wizard is designed to help users find instances where date-related arguments are referencing text dates that only specify the last two digits of a year. This can cause changes in calculation from previous versions of Microsoft Excel. For more information see Knowledge Base article Q176943 http://support.microsoft.com/support/kb/articles/Q176/9/43.asp.

The Date Fix Wizard helps users find errors where the wrong century was entered for a date. It also allows the user to change date formats in a workbook to formats that display four digits of the year. Finally, it allows the user to scan workbooks for the earliest and latest dates in workbooks. This tool will be available shortly at this location.

**Testing guidelines and recommendations:**

In general, avoid testing in a production environment or with non-duplicated production files because one cannot predict side effects with other non-compliant products. Interoperability testing with other Microsoft Office products can be conducted safely.

The following areas should be examined to verify whether dates are being properly

used. The table below can be used to guide testing of Microsoft Excel within your organization.

| Sub-System | Component | |
|---|---|---|
| *File* | Various File Formats | Avoid storing 2Y dates in text file formats such as TXT, DIF, CSV, PRN. The default column width with default fonts may truncate characters with date formats that have 8 digits and two separators. To correct, increase the column width, or change the font to a fixed-width typeface such as Courier New. |
| *Data* | Import from: text, Databases, External data sources Sort | Data imported from databases and other external sources is often imported as text. Importing 2Y dates will be parsed with the 2029/1930 cutoff. This is different from previous versions of Excel, so use 4Y dates to prevent confusion. |
| *Basic Use* | Functions Date Entry Natural Language Functions | Functions referring to text dates will parse according to the 2029/1930 cutoff rule. Date entry will parse according to the 2029/1930 cutoff rule. |
| *Visual Data* | Charts | Since chart labels are normally used for display, and not for calculation, this should not pose a significant issue. |
| *VB/VBA* | Transfer between VB/VBA and cells | Internally, VBA treats dates as serial values, exactly like Excel. However, since VBA uses the "M/d/yy" format, you should avoid transferring the date text through VBA, since it could parse to the wrong century. This will also help avoid issues with international users who have a system short date format with an order other than M-d-y. |

**Additional Testing Instructions**

Microsoft Excel has been designed for calculations in the year 2000. Microsoft understands that for various reasons customers may be required to conduct their own year 2000 certification testing. Microsoft provides the tests below to aid customers in conducting their own year 2000 certification of Microsoft Excel.

Users who work with dates in Microsoft Excel will benefit from changing the system short date format to one that uses a 4-digit year, (i.e. "MM/dd/yyyy"). This change will allow the user to clearly see the century of a date. Conducting the below tests is only worthwhile if 4-digit years are used. If you decide not to set your system short date format to include a 4-digit year, you can format each cell individually by selecting Format/Cells/Number/Custom, and entering a 4-digit year format. To change the system short date format, press the Start button, then select Settings, Control Panel, Regional Settings, select the Date page, then change the Short Date Style to a format that includes a 4-digit year by replacing the "yy" portion with "yyyy".

Verify that Microsoft Excel transitions smoothly into the year 2000:Caution! Before conducting this test, make sure you do not have any software containing a license that expires by the year 2000. This is especially common with beta copies of software programs. If a program determines that its license has expired it is possible the program will no longer boot, even after resetting the system clock. Changing a system clock on a network can affect other computers connected to the network, so it is highly recommended that you isolate the computer from all other systems before changing the system clock to conduct the following test.

Set the system clock to 11:59 p.m. December 31, 1999. Start Excel. In cell A1 (cell R1C1 if in R1C1 mode), enter =NOW(). After one minute, press {F9} to recalculate the formula you entered in A1. Note that the time and date shown will be in the year

2000, and nothing unusual has happened to Microsoft Excel. Remember to reset your system clock to the correct time and date after conducting this test.

Verify that Microsoft Excel recognizes the year 2000 as a leap year: Start Excel. In cell A1 (cell R1C1 if in R1C1 mode), enter "=DATE(2000,2,28)+1". Note that the resulting date is February 29, indicating that Excel correctly recognizes that 2000 is a leap year. Note: The year 1900 is not a leap year. However, in your testing you may notice Microsoft Excel treats 1900 as a leap year. This algorithm was adopted to maintain compatibility with dates in Lotus 1-2-3, and is by design. The calculation for leap years used by the Gregorian calendar is as follows. If a year is evenly divisible by four, it is a leap year, unless the year is evenly divisible by 100. If a year is evenly divisible by 100, it is not a leap year, unless it is also evenly divisible by 400. (See KB article Q181370 http://support.microsoft.com/support/kb/articles/Q181/3/70.asp for more information.)

# C.9 Vendor Data – Internet Explorer

Microsoft Year 2000 Readiness Disclosure & Resource Center

**Internet Explorer (32-bit) 4.0x (English) - 32-Bit Win**
Product Summary

| | |
|---|---|
| Product: **Internet Explorer** (32-bit)<br>Version: 4.0x | Category: **Compliant**<br>Operating System: 32-Bit Win |
| Language: English | Release Date: 01 Sep 1997 |
| Operational Range: | - |
| Prerequisites: | Internet Explorer 4.01 Service Pack-1, Microsoft Wallet 2.1.1383 or later, Updated comctl32.dll 4.70.3110.9 or later, Updated Microsoft Virtual Machine |
| Product Dependencies: | Windows 95, or Windows NT4 Service Pack 3 |
| Clock Dependencies: | System Clock, DCOM, COMCTL, OLEAUT32 |
| Last Updated: | 22 Jan 1999 |

**Product Details**
**Operational Range for Data:**
1980-2079
This document pertains to Internet Explorer version 4.01. Internet Explorer 4.0 has date related issues that are resolved by installing Internet Explorer 4.01 from www.microsoft.com\ie\download.htm in addition the updates recommended below.
**How the product handles dates:**
> Dates are stored internally as Win32 FILETIME structures. The FILETIME structure is a 64-bit value representing the number of 100-nanosecond intervals since January 1, 1601.
> **Two-digit shortcut handling:**
> Microsoft Internet Explorer 4.01 interprets dates entered with a 2-digit shortcut in the following way:
> 1/1/00 through 12/31/79 are interpreted as 1/1/2000 through 12/31/2079
> 1/1/80 through 12/31/99 are interpreted as 1/1/1980 through 12/31/1999

**Product Issues:**
1. Issues Resolved by Service Pack 1.
Service Pack 1 for Internet Explorer 4.01 resolves the following minor issues with Internet Explorer 4.01:
- If a web site uses a cookie with a 2-digit year of "00", Internet Explorer recognized the cookie as expired. Cookies with 4-digit expiration dates, or expiration dates before and after the year 2000 are not affected.
- If a web server communicates a 2-digit year of "00" in its HTTP/1.0 header, Internet Explorer will recognize pages on that site as expired and not cache them locally. Browsing the site will work normally while connected, but will not be available for offline browsing. HTTP/1.1 headers, headers with a 4-digit year, or headers containing 2-digit years before and after the year 2000 are not affected.
- If Microsoft Wallet is installed (an optional add-on for Internet Explorer configured via the "Content" tab of Internet Options), Internet Explorer will not allow the addition of a credit card with an expiration date in or beyond the year 2000. Wallet will also not allow users to add or edit their credit card information if the system

date is in or beyond the year 2000.
1. Microsoft Wallet.
   When entering credit card information in versions of Microsoft Wallet before 2.1.1383, users must enter month, day, and year for expiration dates beyond 2000. Otherwise, information may be parsed incorrectly. For example, entering a credit card with expiration 5/01 will be parsed as May 1 of the current year. This behavior is changed in Wallet in version 2.1.1383 and later. To resolve this issue, install Microsoft Wallet 2.1.1383 or later from http://www.microsoft.com/wallet.
2. Date/Time Picker (comctl32.dll).

When Regional Settings from Control Panel are set to use 2 digits for years, the Date/Time Picker function may not return the proper date. To ensure proper handling of dates: set Regional Settings to 4-digit date handling, or use the calendar to choose the date, or update comctl32.dll to the latest version from the location described in the Recommendations section below.

> Install the latest version of comctl32.dll or update comctl32.dll to the latest version from http://www.microsoft.com/msdownload/ieplatform/ie/comctrolx86.asp.
> If running Windows NT Alpha download, download the latest version of comctl32.dll from http://www.microsoft.com/msdownload/ieplatform/ie/comctrlalpha.asp.

4. Microsoft Virtual Machine.

Many versions of the Microsoft Virtual Machine Version , including the VM that ships with Service Pack 1, has year 2000 date related issues. Please refer to the Microsoft Virtual Machine Year 2000 Product Guide Microsoft Virtual Machine for details and recommendations to address issues.

Year 2000 issues have been reported in connection with virtual machines based on the Sun Microsystems Java Development Kit (versions 1.1.1-1.1.5) Applications written in Java that make use of the java.txt.SimpleDateFormat class library may parse 4-digit dates incorrectly.

**To resolve known issues:**

Install Internet Explorer 4.01 Service Pack-1 available on the Microsoft web site for English versions of Internet Explorer 4.01.

**Common date usage errors:**

Independent of Internet Explorer's handling of dates, web page HTML content, JSCRIPT, Java applets, server scripts, or controls may have potential Year 2000 issues.

The JSCRIPT method .getYear() returns a 2-digit string for years within the operational range up to 1999. The method returns a 4-digit string for years within the operational range from 2000. Web authors can use the method .getFullYear(), which returns 4-digit dates.

When viewing dates in Internet Explorer for history, the display of 4-digit years in Windows or Windows NT needs to be enabled through the Regional Settings in Control Panel. If testing certificates in Internet Explorer that are not yet valid, Internet Explorer displays an incorrect message that they are expired.

**Testing guidelines and recommendations:**

Tests of web sites or web-based applications for the year 2000 need to have Internet Explorer, the web server, and if applicable, proxy server transition to operate in the year 2000 under testing. For example, some web and proxy server may use a 2-digit year in its HTTP/1.0 headers. While Microsoft has tested operation with popular web servers and proxy servers, verification of Internet Explorer should include testing of the below items within your corporate environment.

- **Authentication**: If you use a secured site and/or SSL connections, verify proper authentication of authorized users, denial of others, and proper operation. Note: If you are testing certificates in Internet Explorer that are not yet valid, Internet Explorer displays an incorrect message that they are expired.
- **Code Download**: Download of digitally signed code includes a signature with an

expiration date. Verify download, installation, and operation of required ActiveX controls, and proper handling of Authenticode signatures on downloaded code. If you are testing certificates in Internet Explorer that are not yet valid, Internet Explorer displays an incorrect message that they are expired.

- **File Download**: Verify proper download of files referred to by your site.
- **Search**: Verify that search bar works for your preferred search provider.
- **History**: IE organizes sites you have recently visited by "today", "yesterday", and previous weeks.
- **Subscriptions**: IE4 provides for publisher-scheduled updates and expiration for channel content. Verify proper update of subscribed sites.
- **Autoconfiguration**: The Internet Explorer Administration Kit (IEAK) allows for downloading of new settings and restrictions maintained by an administrator on a server. Options for auto-configuration include updating settings by date and by a timeout value.

In addition, contact your web server and proxy server vendor for their Year 2000 status and recommendations.

Some potential year 2000 issues may be content-specific. You should ensure that interactive sites can handle the year 2000 in their web page HTML content, cookies, JSCRIPT, Java applets, server scripts, or controls

# C.10 Vendor Data - Corel WordPerfect 8

## Corel Year 2000 Tested Products

**Year 2000 Information - Corel® WordPerfect® Suite 8 for Windows® 95/Windows NT®**

| | (YY) format | (YYYY) format |
|---|---|---|
| **Date Ranges*** | See individual components | See individual components |
| **Year 2000 Status** | Tested components<br>Corel® WordPerfect® 8 - Year 2000 Compliant<br>Corel® Quattro® Pro 8 - Year 2000 Compliant<br>Corel® Presentations™ 8 - Year 2000 Compliant<br>CorelCENTRAL™ 8 - Year 2000 Compliant | |

*Please note that date functions or features within each application may have different date ranges.

## Year 2000 Frequently Asked Questions

- What is the Year 2000 problem?

- How does it affect my system?

- What do I need to know about using dates?

- Can my operating system's default date formats affect my applications?

- What can I do to be ready for the year 2000?

- Which Corel products are Year 2000 Compliant?

- What does Corel mean by "Year 2000 Compliant"?

- How does Corel evaluate products?

- Will Corel warrant that its products are Year 2000 Compliant?

- Should I test my Corel Year 2000 Compliant Products?

- Should I test my PC?

- Which versions of Paradox® has Corel tested?

- How is Corel responding to Year 2000 information requests?

**What is the Year 2000 problem?**

Many software and hardware products were designed to store dates using a 2-digit year (98) instead of a 4-digit year (1998). This was done to save what was, at the time, valuable memory. As a result, some applications could misinterpret the year "00" as 1900, 1980, or some other date.

Additionally, the year 2000 is a leap year. A leap year only occurs at the turn of the century every 400 years, and some applications may have failed to accommodate this.

**How does it affect my system?**

Your computer system consists of several components: applications (such as word processing, spreadsheet, database and other applications), an operating system (such as Windows® 95), a basic input/output system (BIOS) and a central processing unit (CPU).

When your application requires a date, it requests one from the operating system. The operating system, in turn, requests the date from the BIOS, which requests it from the CPU clock. The CPU returns the date to the BIOS, which may interpret the date before it reports it to the operating system. The operating system may then format the date before reporting it to the application.

As a result, if any one of these components fails to properly recognize the date, the application may fail to store and display the date correctly.

**What do I need to know about using dates?**

How your application stores and displays dates, as well as how you enter, edit, export and import dates, can affect how your application handles date information before, during and after the year 2000.

*Date Storage*
How an application stores dates can affect how it displays and processes date information. If an application stores dates in a format that includes the century information (i.e. 1998 instead of 98, or 2002 instead of 02), it should have little difficulty displaying and processing dates after the turn of the century.

If the application stores dates in a format that does not include the century information (i.e. in 2-digit format), the application may have difficulty displaying and processing dates after the turn of the century.

*Date Display*
You can display date information in many different formats, such as 01/01/1998, 01/01/98, January 1, 1998, or 1 Jan 1998. However, we recommend that you always display the date with a 4-digit year to avoid any misinterpretation.

*Date Entry*
How you enter date information can affect how the information is stored. For speed and ease of use, many people prefer to enter a date with a 2-digit year (mm/dd/yy). If you do so, the application must make an assumption as to which year you intended when it stores the information.

For information on how Corel products interpret 2-digit year entries, see the Corel Year 2000 Product Listing.

*Date Editing*
How you edit date information can also affect how the information is stored. If you edit a date by removing a 4-digit year and re-entering the year with a 2-digit entry, you may alter the original century designation. We recommend editing dates by re-entering a 4-digit year.

*Import/Export*
You have to be careful when you are moving date information from one application to another. If date information that is displayed with a 2-digit year is exported to an application with different 2-digit entry assumptions, the date information may be changed. Also, if either of the applications fails to handle date information correctly, the information can become corrupted

**Can my operating system's default date formats affect my applications?**

Yes. The default date formats of your operating system can affect your application, as outlined above. Be sure to set all the operating system default date formats to a 4-digit year.

**What can I do to be ready for the year 2000?**

There are several things you can do to make your transition to the year 2000 easier:

- Confirm that the components of your systems are Year 2000 compliant by contacting the manufacturer. Set the date defaults in your system to display date information with a 4-digit year

- Be aware of the 2-digit year entry assumptions made by your applications

- Make sure that any data previously entered or stored in a 2-digit year format is entered and stored in a 4-digit format and that the information has been accurately converted

**Which Corel products are Year 2000 Compliant?**

For detailed information, see the Corel Year 2000 Product Listing.

**What does Corel mean by "Year 2000 Compliant"?**

"Year 2000 Compliant" means that the product will:

- function normally when the operating system date advances to the year 2000

- process multi-century date information correctly and in an unambiguous manner, regardless of the system date

- recognize February 29, 2000 both as a valid operating system date and as a valid date entry

provided that it is used in accordance with its associated documentation and other published operating recommendations and exceptions (publicly available from Corel's Year 2000 Web site), and that all other products (such as, hardware, firmware and software) used with the product properly exchange date data with it.

**How does Corel evaluate products?**

All products go through the Corel Year 2000 Product Evaluation Program.

**Will Corel warrant that its products are Year 2000 Compliant?**

Corel's commitment and that of its affiliates to prepare new products and major upgrades of existing products released in 1997 for transition to the year 2000 should not be considered in any way to be a further representation or warranty on Corel software or a certification or guarantee of

Year 2000 readiness. You assume all risk and liability associated with your reliance upon Year 2000 information provided by Corel.

All Corel representations and/or warranties to users of Corel products are contained within the end-user license agreement accompanying each Corel software product.

**Should I test my Corel Year 2000 Compliant products?**

Corel has made every effort to ensure that its product testing is accurate. However, because each customer's environment is different from Corel's testing environment, it is always the responsibility of customers to assess and evaluate their Corel products within their own environment.

This includes being aware of the <u>relevant issues</u> and contacting the manufacturers of the various components that make up your system to determine what testing they have completed. You should also set all your default date formats to display a 4-digit year. Always create separate test files to conduct your Year 2000 testing; ***never use a current copy of any file for testing***.

**Should I test my PC?**

You should contact your hardware manufacturer for information about your PC and Year 2000 issues before you begin testing. If you test your PC, be sure to use an isolated system and not one currently used in operations. Changing the date on a production system could cause problems for date-dependent operations and data, such as calendar and e-mail functions.

**Which versions of Paradox® has Corel tested?**

Corel Paradox® 8 is Year 2000 Compliant. Corel has tested Paradox® 7 as a component of the Corel® WordPerfect® Suite 7 for Windows® 3.x and it is Year 2000 Compliant; however, this product was developed by Borland International Inc., and if you own a standalone version of this product you should contact Inprise (formerly Borland) for Year 2000 information at http://www.inprise.com/devsupport/y2000.

No Paradox versions prior to 7 have been tested for Year 2000 issues by Corel. These products were developed by Borland International Inc., and Corel does not have the right to test these products. You should contact Inprise (formerly Borland) for Year 2000 information at http://www.inprise.com/devsupport/y2000.

**How is Corel responding to Year 2000 information requests?**

Corel welcomes and reviews every request for information regarding Year 2000 issues. However, due to the great volume and diversity of these requests, Corel can not complete individual questionnaires for Year 2000 product information at this time. In order to provide our customers with the most current Year 2000 information as quickly as possible, we've created this Web site which is updated as new information becomes available.

Any further requests for information may be sent to the following address:

Year 2000 Product Information Manager
Corel Corporation
1600 Carling Ave.
Ottawa, ON
Canada
K1Z 8R7
Telephone: 1-613-728-0826, ext. 1786
Fax: 1-613-761-9177

E-mail: Year2000C@corel.ca

Due to the large volume of information requests that we receive, please be aware that a response may take two to three weeks. Be assured, however, that we will make every attempt to answer each request. Your patience in this matter is greatly appreciated.

If you request information via e-mail from outside North America, please be aware that our e-mail response may fail to connect. To ensure that we can respond to your information request without delay, please include your fax number, mailing address or telephone number.

Please also be aware that our e-mail response includes a Corel WordPerfect document. If you are unable to access a Corel WordPerfect document please advise us in advance so that we can arrange to either fax or mail you the information.

We recommend that you also visit the many Year 2000 Web sites that are provided by hardware and software manufacturers, government agencies, educational institutions and independent organizations for additional Year 2000 information.

# C.11 Vendor Data - WordPerfect 6.1

**Year 2000 Issues**
**Document Summary Feature**

1. When entering the date with a two-digit year in the Document Summary while the Windows® Short Date Format is set to include the century, the two-digit year entry will default to:

   00 = display of 0, but defaults to current System year
   01 – 69 = 20xx
   70 – 99 = 19xx

   For example:

   - set the Windows Short Date Format to include the century

   - exit and re-open Windows

   - in Corel® WordPerfect®, select File, Document Summary

   - the Creation Date will show the system date.

   - delete the four-digit year and enter '00' in its place

   - click the Calendar icon (it defaults to the system date)

   - click Cancel

   - delete '00' and enter '01'; click the Calendar icon (the Creation Date shows 2001)

   - delete '01' and enter '70'; click the Calendar icon (the Creation Date shows 1970)

   The solution: enter dates using a four-digit year entry.

2. With the Windows Short Date Format set <u>not</u> to include the century, entering or editing a date with either a two- or four-digit year entry in Document Summary will default (regardless of system date) to:

   2000 = display of 00, but defaults to current System year
   xx70 – xx99 = 1970 – 1999
   xx01 – xx69 = 2001 – 2069

   For example:

   - set the Windows Short Date Format <u>not</u> to include the century

   - exit and re-open Windows

- in Corel WordPerfect, select File, Document Summary. The Creation Date will show the system date

Using a four-digit year entry:

- delete the two-digit year and enter '2000' in its place

- click the TAB key and the Calendar icon; the Creation Date defaults to the system date

- click Cancel

- delete '00' and enter '2001'

- press the TAB key and the Calendar icon; the Creation Date shows 2001

- delete '01' and enter '2070'

- click Tab and the Calendar icon; the Creation Date shows 1970

Using a two-digit year entry,

- delete the two-digit year and enter '00' in its place

- press the TAB key and click the Calendar icon; the Creation Date defaults to the system date

- click Cancel

- delete '00' and enter '01'

- press the TAB key and click the Calendar icon; the Creation Date shows 2001

- delete '01' and enter '70'

- press the TAB key and click the Calendar icon; the Creation Date shows 1970

The solution:

- set the Windows Short Date Format to include the century

- exit and re-open Windows

- enter all dates using a four-digit year

**Tables**

1. When entering the year in a date/time formatted cell, a two-digit year entry will result in a 19xx year, regardless of the Windows Short Date Format or the operating system date.

For example:

- in Corel WordPerfect 6.1, select Table, Create
- select a table size, click OK
- click in the first cell, and select Table, Number Type
- select Date/Time, and click OK
- enter 01/01/01, and press Tab
- the date defaults to January 1, 1901

The solution: enter dates using a four-digit year entry.

2.  When editing a date in a date/time formatted cell, if the four-digit year is deleted then four digits must be re-entered. If only the last two digits are re-entered, the year will default to 19xx, regardless of the original entry.

    For example:

    - in Corel WordPerfect 6.1, select Table, Create
    - select a table size and click OK
    - click in the first cell, and select Table, Number Type
    - select Date/Time, and click OK
    - enter 01/01/2000, and press the TAB key; the cell reads January 1, 2000
    - delete the year '2000' and enter '00' in its place
    - press the TAB key; the cell defaults to January 1, 1900

    The solution: always re-enter dates using a four-digit year entry.

3.  When entering the year in a table using a Table Date Formula, a two-digit year entry will always result in a 19xx date regardless of the Windows Short Date Format or the operating system date.

    For example:

    - in Corel WordPerfect 6.1, select Table, Create
    - select the default table size (3 columns, 1 row), and click OK
    - click in the first cell, and select Table, Formula Bar

- click Functions

- in the Table Functions dialog box, select List Functions, Calendar

- select MDY (Month, Day, Year), and click Insert

- where Month is highlighted in the window, enter '01'

- highlight Day and enter '01'

- highlight Year and enter '00'; it should look like MDY(01,01,00)

- click the green check mark; the number '1' (the date's serial date value) should be in the first cell

- right-click the cell, and select Number Type, Date/Time; the date reads January 1, 1900

- enter MDY (01,01,2000) in the window, and click the green check mark; the date now reads January 1, 2000

The solution: enter dates using a four-digit year entry after 1999.

## Advanced User Issues
**Document Summary Feature**
When using the Calendar icon to enter a date in the Creation Date window, the (<<) icon will only go back as far as the year 1970. The (<) icon will allow you to go back past 1970, on a month-by-month basis. This also occurs when you use the calendar icon to enter a date in the Date Completed or Revision Date windows.

For example:

- in Corel WordPerfect, select File, Document Summary; the Creation Date window will show the system date

- click the Calendar icon and the (<<) icon to return the year; the year will only go back to 1970

- click (<) icon to go past January 1970

The solution: set the Creation Date, Date Completed or Revision Dates earlier than 1970 by entering the date using the keyboard and ensuring that the Windows Short Date Format is set to include the century.

**Importing Date Data from Corel® Quattro® Pro 6**
Not all User Defined Date Formats (UDFs) are imported from Corel® Quattro® Pro 6 to Corel WordPerfect 6.1 with the date format/value intact.

When importing a date formatted spreadsheet from Corel Quattro Pro 6 to Corel

WordPerfect 6.1, all five standard two-digit date formats import correctly, as does the four-digit UDF of TMonth D YYYY; however, the remaining UDFs import as a serial date value.

When this serial date value is converted to a date format (click the cell and select Table, Number Type, Date/Time), this date is one day later than the original date entered in the Corel Quattro Pro 6 spreadsheet.

This results because the two applications have different beginning serial dates: Corel Quattro Pro 6 has 12/31/1899 and Corel WordPerfect 6.1 has 1/1/1900.

For example:

- in Corel Quattro Pro 6, enter the same date in 10 different cells

- format each cell with a different date format by right-clicking each cell and selecting Block Properties (use the date formats under User Defined as well)

- save and exit Corel Quattro Pro 6

- open Corel WordPerfect and select Insert, Datasheet/Spreadsheet, Import

- enter the filename of the Corel Quattro Pro 6 file; the five 'Date Formats' convert correctly

- only one UDF (TMonth D YYYY) converts correctly; the rest convert to a serial date value

The solution: when creating data that includes dates to be imported into Corel WordPerfect 6.1, use one of the standard two-digit year Date Formats or the four-digit UDF of Tmonth D YYYY when formatting a cell.

If you require a different format, the date formats can be converted, after importing, to any other date format.

To do this,

- click in the cell, and select Table, Number Type

- click Date/Time and select Custom

- select a date format, click OK and OK again

# C.12 Vendor Data – Lotus 1-2-3

# Lotus SmartSuite Product Family and the Year 2000

Millions of users around the world, from individuals to small businesses to large enterprises, use Lotus SmartSuite applications to run their business. This page includes general Year 2000 information to help SmartSuite customers get ready for the Year 2000.

SmartSuite releases since 1992 have included versions of **Lotus 1-2-3**, the spreadsheet application that started the IBM PC computing revolution in 1983, **Lotus Ami Pro** and **Word Pro** for word processing, **Lotus Freelance Graphics** for business presentations, **Lotus Approach** for database applications, **Lotus Organizer** for personal information management, **Lotus ScreenCam** for multimedia presentations, the recently introduced **Lotus FastSite** for web publishing, and in some early releases, a license for **Lotus cc:Mail**.

**Lotus SmartSuite
Year 2000 Resources:
Year 2000 FAQ**

**Current releases of Lotus SmartSuite are Year 2000 ready.**
Versions of SmartSuite for Windows since release 3.1, and SmartSuite for OS/2 since the 96 Edition are Year 2000 ready, in accordance with Lotus and IBM Year 2000 readiness guidelines. Prior releases are not Year 2000 ready due to the inclusion of older not Year 2000 ready versions of Lotus cc:Mail or Lotus Organizer. The new SmartSuite Millennium Edition includes new sliding window date handling features for maximum 2-digit and 4-digit date handling flexibility. For more information on the readiness of SmartSuite applications, see our Year 2000 FAQ.

If you'd like to generate a Lotus product readiness status report by product version, platform or operating system, please visit the IBM Year 2000 Product Readiness Database. For general information on IBM and the Year 2000, please visit the IBM Year 2000 Home Page.

# C.13 Vendor Data – Netscape Navigator

## Year 2000 Readiness Status
## Netscape Client Products

**Readiness Status:**

| | |
|---|---|
| A | Year 2000 Compliant |
| B | Year 2000 Compliant With a Patch |
| C | Under Evaluation |
| D | Not Year 2000 Compliant |
| E | Not Tested |

| Product | Version* | Product Family | Operating System | Status |
|---|---|---|---|---|
| Communicator | 4.5 | Client | All | A |
| Communicator | 4.08 | Client | All | A |
| Communicator | 4.07 | Client | All | A |
| Communicator | 4.06** | Client | All | A |
| Communicator | 4.05** | Client | All | A |
| Communicator | 4.04** | Client | All | A |
| Communicator | 4.03** | Client | All | A |
| Communicator | 4.02** | Client | All | A |
| Communicator | 4.01** | Client | All | A |
| Communicator | 4.0** | Client | All | A |
| Navigator | 4.08 | Client | All | A |
| Navigator | 4.07 | Client | All | A |
| Navigator | 4.06** | Client | All | A |
| Navigator | 4.05** | Client | All | A |
| Navigator | 4.04** | Client | All | A |
| Navigator | 4.03** | Client | All | A |
| Navigator | 4.02** | Client | All | A |
| Navigator | 4.01** | Client | All | A |
| Navigator | 3.x | Client | All | A |
| Navigator | 2.02 | Client | All | A |
| Navigator | 2.01 and all earlier versions | Client | All | E |
| Navigator Gold | 3.x** | Client | All | A |
| Navigator Gold | 2.02 | Client | All | A |
| Navigator Gold | 2.01 and all earlier versions | Client | All | E |

\* International (40-bit)/foreign language versions included.
\*\* Includes third-party Java components that may not be Year 2000 Compliant in all respects. Please contact the manufacturers of these components for more information.